ENUMERATIO

PLANTARUM GUATEMALENSIUM

QUAS EDIDIT

JOHN DONNELL SMITH.

Novarum additis descriptionibus et tabulis.

PARS II.

OQUAWKÆ IN REPUBL. ILLINOIS.
APUD H. N. PATTERSON
Typographum Botanicum.
MDCCCXCI.
1891

Conquisitio plantarum Guatemalensium a Barone de Tuerckheim incepta postea autem a me in ipsis terris peregrinante, cum florum meridionalium novitate captus essem, amplius et latius persecuta stirpes exsiccatas hoc libello enumeratas suppeditavit. Quas quidem omnes, Universitati litterariæ Baltimoriensi quæ dicitur *Johns-Hopkins* aliquando dedicaturus, ego nunc interea conservo, duplicata exempla tot quot suppetunt in prima herbaria, sicut antea, distribuens. Quosdam mihi ordines, elaboranti ut maior esset auctoritas, aliquot botanicorum clarorum auxilio, quod in propriis locis adnotavi, grato animo usus sum. Nonullas denique plantas in Parte I huius Catalogi nunc imperfecte nunc non satis recte determinatas liceat in Appendice sub capitulo *Nominum Inserendorum* iterum atque emendatius enumerare. J. D. S.

Baltimorii, m. Febr. 1891.

PLANTÆ GUATEMALENSES.

1356. Clematis grossa, Benth.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.

M. Jan. 1888. Leg. H. von Türckheim.

2129. Ranunculus dichotomus, Moç. et Sessé.

Dueñas, Depart. Zacatepequez, alt. 5,000 pp.

M. Apr. 1890. Leg. J. D. S.

1661. Ranunculus Hookeri, Schlecht.

Tactic, Depart. Alta Verapaz, alt. 4,800 pp.

M. Apr. 1889. Leg. J. D. S.

1765. Davilla Kunthii, St. Hil.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

1808. Doliocarpus Rolandri, Gmel.

(*D. pubens, Mart.*)

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

2058. Rollinia pulchrinervia, A. DC.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

1811. Anona palustris, L.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

2135. Anona palustris, L.
Cuyuta, Depart. Escuintla, alt. 200 pp.
M. Apr. 1890. Leg. J. D. S.

1880. Cissampelos Pareira, L.
Rio Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1881. Cissampelos Pareira, L.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1674. Nymphæa ampla, DC., var. Plumieri, Planchon.
Boca del Polochic, Depart Yzabal, alt. 200 pp.
M. Apr. 1889. Leg. J. D. S.

2177. Bocconia frutescens, L.
Misco, Depart. Zacatepequez, alt. 6,000 pp.
M. Apr. 1890. Leg. J. D. S.

2172. Bocconia vulcanica.
Botan. Gaz. xvi. 1.
Volcan de Agua, Depart. Zacatepequez, alt. 10,000 pp.
M. Apr. 1890. Leg. J. D. S.

2105. Nasturtium Mexicanum, Moc. et Sessé.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1759. Nasturtium palustre, DC., var. brevipes, DC.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1676. Lepidium lasiocarpum, Nutt, var. tenuipes, Watson.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1953. Capparis amygdalina, Lam.
Rio Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1724. Capparis frondosa, Jacq.
Rio Polochic, Depart. Yzabal, alt. 300 pp.
M. Apr. 1889. Leg. J. D. S.

2165. Viola Hookeriana, HBK.

Volcan de Agua, Depart. Zacatepequez, alt. 9,500 pp.
M. Apr. 1890. Leg. J. D. S.

1983. Ionidium parietariæfolium, DC.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1803. Cochlospermum hibiscoides, H. et B.

Boca del Polochic, Depart. Yzabal, alt. 200 pp.
M. Apr. 1889. Leg. J. D. S.

2003. Cochlospermum hibiscoides, H. et B.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1680. Polygala Berlandieri, Watson.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1857. Polygala floribunda, Benth.

Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1966. Polygala floribunda, Benth.

Sapote, Depart. Guatemala, alt. 4,300 pp.
M. Mart. 1890. Leg. J. D. S.

1980. Polygala hebantha, Benth.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2059. Securidaca erecta, L.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1506. Monnina Xalapensis, HBK.

Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

2142. Monnina Xalapensis, H. B. K.

San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

2153. Stellaria nemorum, L.

Volcan de Agua, Depart. Zacatepequez, alt. 11,500 pp.
M. Apr. 1890. Leg. J. D. S.

1875. Stellaria prostrata, Baldw.
Guatemala, Depart. Guatemala, alt. 4,700 pp.
M. Febr. 1890. Leg. J. D. S.

2156. Arenaria lanuginosa, Rohrb.
Volcan de Agua, Depart. Zacatepequez, alt. 11,000 pp.
M. Apr. 1890. Leg. J. D. S.

2147. Hypericum Mexicanum, L.
(*H. Mutisianum, H. B. K.; H. resinosum, Benth.*)
Volcan de Agua, Depart. Zacatepequez, alt. 11,500 pp.
M. Apr. 1890. Leg. J. D. S.

2193. Hypericum uliginosum, H. B. K.
San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

1694. Vismia latifolia, Choisy.
Yzabal, Depart. Yzabal, alt. 120 pp.
M. Apr. 1889. Leg. J. D. S.

2090. Mammea Americana, L.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

1752. Ruyschia Souroubea, Swz.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1719. Saurauja macrophylla, Linden.
Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2171. Saurauja oreophila, Hemsl.
Volcan de Agua, Depart. Zacatepequez, alt. 10,000 pp.
M. Apr. 1890. Leg. J. D. S.

1445. Saurauja pedunculata, Hook.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Aug. 1888. Leg. H. von Türckheim.

1939. Gaya hermannioides, H. B. K.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

489. Sida paniculata, L.
Chiacam, Depart. Alta Verapaz, alt. 2,500 pp.
M. Febr. 1880. Leg. H. von Türckheim.

1949. Wissadula scabra, Presl.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.

M. Mart. 1890. Leg. J. D. S.

1885. Abutilon elatum, Griseb.

Guatemala, Depart. Guatemala, alt. 4,800 pp.

M. Febr. 1890. Leg. J. D. S.

1988. Pavonia rosea, Schlecht.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

341[A]. Pavonia scabra, Presl., var.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.

M. Jan. 1879. Leg. H. von Türckheim.

1991. Malvaviscus arboreus, H. B. K.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

1658[A]. Malvaviscus concinnus, H. B. K.?

Boca del Polochic, Depart. Yzabal, alt. 200 pp.

M. Apr. 1889. Leg. J. D. S.

1973. Hibiscus bifurcatus, Cav.

Guatemala, Depart. Guatemala, alt. 4,600 pp.

M. Febr. 1890. Leg. J. D. S.

1658. Hibiscus bifurcatus, Cav.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

1892. Hibiscus Rosa-sinensis, L.

(*culta.*)

Guatemala, Depart. Guatemala, alt. 5,000 pp.

M. Febr. 1890. Leg. J. D. S.

2098. Pachira macrocarpa, Cham. et. Schl.

Masagua, Depart. Escuintla, alt. 400 pp.

M. Apr. 1890. Leg. J. D. S.

2008. Bombax ellipticum, H. B. K.

San Luis, Depart. Escuintla, alt. 1,000 pp.

M. Mart. 1890. Leg. J. D. S.

1924. Chorisia soluta.

Botan. Gaz. xvi. 1.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.

M. Febr. 1890. Leg. J. D. S.

2154. Chiranthodendron platanoides, H. Baill.
(*Cheirostemon platanoides, Humb. et. Bonpl.*)
Volcan de Agua, Depart. Zacatepequez, alt. 10,000 pp.
M. Apr. 1890. Leg. J. D. S.

1410. Myrodia Guatemalteca.
Botan. Gaz. xvi. 2.
Pansamalá, Depart. Alta Verapaz, alt. 4,000 pp.
M. Jan. 1889. Leg. H. von Türckheim.

1634. Myrodia Guatemalteca.
Botan. Gaz. xvi. 2.
Pansamalá, Depart. Alta Verapaz, alt. 4,000 pp.
M. Apr. 1889. Leg. J. D. S.

1764. Melochia lupulina, Swz.
(*Mougeotia inflata, H. B. K.*)
Chicacoa, Depart. Alta Verapaz, alt. 3,500 pp.
M. Apr. 1889. Leg. J. D. S.

560. Melochia pyramidata, L.
Chamiquin, Depart. Alta Verapaz, alt. 1,200 pp.
M. Febr. 1881. Leg. H. von Türckheim.

2101. Waltheria Americana, L.
Masagua, Depart. Escuintla, alt. 400 pp.
M. Apr. 1890. Leg. J. D. S.

1984. Guazuma ulmifolia, Lam.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2116. Buettneria lateralis, Presl.
Concepcion, Depart. Escuintla, alt. 1,200 pp.
M. Apr. 1890. Leg. J. D. S.

2023. Triumfetta semitriloba, L.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1420. Triumfetta speciosa, Seem.
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Sept. 1888. Leg. H. von Türckheim.

1722. Heliocarpus Americanus, L.
Arenal, Depart. Alta Verapaz, alt. 3,000 pp.
M. Apr. 1889. Leg. J. D. S.

1723. Heliocarpus appendiculatus, Turcz.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1932. Muntingia calabura, L.
Rio Amititlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1975. Sloanea quadrivalvis, Seem.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1617. Linum Schiedeanum, Cham. et Schl.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1633. Byrsonima crassifolia, H. B. K.
Panzos, Depart. Alta Verapaz, alt. 450 pp.
M. Maj. 1889. Leg. J. D. S.

1755. Byrsonima crassifolia, H. B. K.
Yzabal, Depart. Yzabal, alt. 130 pp.
M. Apr. 1889. Leg. J. D. S.

2013. Byrsonima crassifolia, H. B. K.
San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2114. Malpighia glabra, L., var. acuminata, Ad. Juss.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

1994. Bunchosia strigosa, Schlecht.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2084. Bunchosia strigosa, Schlecht.
Masagua, Depart. Escuintla, alt. 400 pp.
M. Apr. 1890. Leg. J. D. S.

2078. Heteropteris floribunda, H. B. K.
San Juan Mixtan, Depart. Escuintla, alt. 500 pp.
M. Apr. 1890. Leg. J. D. S.

1995. Heteropteris floribunda, H. B. K., forma eglandulosa.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2068. Heteropteris retusa.
Botan. Gaz. xvi. 2.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1810. Stigmaphyllon alternans, Tr. et Planch.
Serraquitché, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

1805. Stigmaphyllon ciliatum, A. Juss.
Rio Dulce, Depart. Livingston, alt. 200 pp.
M. Mart. 1889. Leg. J. D. S.

1698. Banisteria.
Tactic, Depart. Alta Verapaz, alt. 4,800 pp.
M. Apr. 1889. Leg. J. D. S.

1936. Tribulus maximus, L.
Rio Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1630. Tropæolum Moritzianum, Klotzsch.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2180. Oxalis corniculata, L.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1682. Oxalis dimidiata.
Botan. Gaz. xv. 27.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2109. Oxalis divergens, Benth.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1669. Oxalis latifolia, H. B. K.
Santa Cruz, Depart. Alta Verapaz, alt. 4,800 pp.
M. Apr. 1889. Leg. J. D. S.

1440. Oxalis Neæi, DC.
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Sept. 1888. Leg. H. von Türckheim.

1981. Oxalis Neæi, DC.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2178. Bursera gummifera, Jacq.
Misco, Depart. Zacatepequez, alt. 6,000 pp.
M. Apr. 1890. Leg. J. D. S.

2094. Melia Azedarach, L.
Masagua, Depart. Escuintla, alt. 400 pp.
M. Apr. 1890. Leg. J. D. S.

2112. Trichilia Havanensis, Jacq.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Feb. 1890. Leg. J. D. S.

1908. Trichilia.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Mart. 1890. Leg. J. D. S.

1909. Trichilia.
Guarda Viejo, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2071. Trichilia.
Cuyuta, Depart. Escuintla, alt. 200 pp.
M. Apr. 1890. Leg. J. D. S.

2067. Dichapetalum pedunculatum, H. Baill.
(*Chailletia pedunculata, DC.*)
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1781. Ximenia Americana, L.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1960. Hippocratea celastroides, H. B. K.?
Pacaya, Depart. Amatitlan, alt. 5,500 pp.
M. Mart. 1890. Leg. J. D. S.

2163. Ceanothus azureus, Desf.
Volcan de Agua, Depart. Zacatepequez, alt. 7,500 pp.
M. Apr. 1890. Leg. J. D. S.

2026. Vitis Caribœa, DC.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1792. Vitis erosa, Baker.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1929. Vitis sicyoides, Baker.
Rio Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1760. Vitis sicyoides, Baker,
forma canescens, Planchon.
Arenal, Depart. Alta Verapaz, alt. 3,000 pp.
M. Apr. 1889. Leg. J. D. S.

2041. Serjania Caracasana, Willd.,
forma genuina.
determ. Radlkofer.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2104. Serjania Grossii, Schlecht.
determ. Radlkofer.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Mart. 1890. Leg. J. D. S.

2100. Serjania Mexicana, Willd.
determ. Radlkofer.
Masagua, Depart. Escuintla, alt. 400 pp.
M. Apr. 1890. Leg. J. D. S.

1153. Serjania psilophylla, Radlk. n. sp. ined.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Febr. 1887. Leg. H. von Türckheim.

1907. Serjania rachiptera, Radlk. n. sp. ined.
Guarda Viejo, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1766. Serjania rufisepala, Radlk. n. sp. ined.
Tres Cruces, Depart. Alta Verapaz, alt. 4,800 pp.
M. Apr. 1889. Leg. J. D. S.

1662. Paullinia scarlatina, Radlk. n. sp. ined.
Boca del Cajabon, Depart. Yzabal, alt. 350 pp.
M. Apr. 1889. Leg. J. D. S.

2057. Sapindus Saponaria, L.
determ. Radlkofer.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1882. Mangifera Indica, L.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1816. Anacardium occidentale, L.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1992. Anacardium occidentale, L.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2002. Spondias purpurea, L.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2087. Spondias.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

1791. Rhus juglandifolia, Kunth.
determ. Radlkofer.
Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1432. Rhus Schiedeana, Schlecht.?
determ. Radlkofer.
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Sept. 1888. Leg. H. von Türckheim.

2277. Moringa pterygosperma, Gærtn.
(*culta.*)
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

2318. Crotalaria incana, L.
San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2319. Crotalaria Maypurensis, H. B. K.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2320. Crotalaria Maypurensis, H. B. K., var.?
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

104. Crotalaria nitens, H. B. K.
(*C. Schiedeana, Steud.*)
Samac, Depart. Alta Verapaz, alt. 4,500 pp.
M. Maj. 1879. Leg. H. von Türckheim.

2321. Crotalaria striata, DC.,
var. (*C. Brownei, DC.*)
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2152. Lupinus flabellaris, Bertol.
Volcan de Agua, Depart. Zacatepequez, alt. 11,000 pp.
M. Apr. 1890. Leg. J. D. S.

2278. Medicago sativa, L.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

2315. Dalea diffusa, Moric.
Aceituna, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

2302. Dalea lagopus, Willd.?
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2272. Dalea macrostachya, Moric.
San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

1769. Indigofera Anil, L.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2291. Indigofera Anil, L.
San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2281. Indigofera mucronata, Spreng.
Masagua, Depart. Escuintla, alt. 400 pp.
M. Apr. 1890. Leg. J. D. S.

1429. Gliricidia maculata, H. B. K.
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Sept. 1888. Leg. H. von Türckheim.

1750. Gliricidia maculata, H. B. K.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2314. Gliricidia maculata, H. B. K.
(*Robinia variegata, Schlecht.?*)
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2275. Diphysa robinioides, Benth.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

2274. Cracca Caribœa, Benth.
Concepcion, Depart. Escuintla, alt. 1,200 pp.
M. Apr. 1890. Leg. J. D. S.

2309. Cracca Caribœa, Benth.
Rio Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2300. Sesbania Ægyptiaca, Pers.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2283. Æschynomene Americana, L.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1774. Æschynomene sensitiva, Swz.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2308. Æschynomene sensitiva, Swz.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1817. Desmodium adscendens, DC.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1736. Desmodium incanum, DC.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1428. Desmodium infractum, DC.
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Sept. 1888. Leg. H. von Türckheim.

2325. Desmodium Nicaraguense, Œrst.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2299. Desmodium Scorpiurus, Desv.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1427. Desmodium scutatum, Hemsl.
Barranca del Rubelcruz, Depart. Alta Verapaz, alt. 2,500 pp.
M. Jan. 1889. Leg. H. von Türckheim.

1758. Desmodium scutatum, Hemsl.
Barranca del Rubelcruz, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

2323. Desmodium Skinneri, Benth.
(nec Bot. Mag. t. 5452.)
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2324. Desmodium Skinneri, Benth.
(nec Bot. Mag. t. 5452.)
Aceituna, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

2301. Desmodium.
Guarda Viejo, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2287. Centrosema Plumieri, Benth.
Masagua, Depart. Escuintla, alt. 400 pp.
M. Apr. 1890. Leg. J. D. S.

2285. Centrosema pubescens, Benth.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2292. Centrosema pubescens, Benth.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1419. Cologania procumbens, Humb. et. Bonpl.
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Sept. 1888. Leg. H. von Türckheim.

1793. Erythrina Corallodendron, L.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

331. Calopogonium galactioides, Benth. et Hook.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Dec. 1886. Leg. H. von Türckheim.

1321. Galactia discolor. n. sp. ined.
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Jul. 1887. Leg. H. von Türckheim.

1726. Dioclea Guianensis, Benth.
(*Dolichos comosus, Mey.*)
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2296. Canavalia gladiata, DC.
Guatemala, Depart. Guatemala, alt. 4,800 pp.
M. Febr. 1890. Leg. J. D. S.

2312. Phaseolus disophyllus, Benth.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2297. Phaseolus lunatus, L.
Guatemala, Depart. Guatemala, alt. 4,800 pp.
M. Febr. 1890. Leg. J. D. S.

1738. Phaseolus speciosus, H. B. K.
Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2286. Phaseolus Truxillensis, H. B. K.

San Luis, Depart. Escuintla, alt. 1,000 pp.

M. Mart. 1890. Leg. J. D. S.

2295. Phaseolus Truxillensis, H. B. K., forma sericea.

Pinula, Depart. Guatemala, alt. 4,300 pp.

M. Febr. 1890. Leg. J. D. S.

1818. Vigna luteola, Benth. var. (*V. glabra, Savi.*)

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

2313. Pachyrhizus palmatilobus, Benth. et Hook.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.

M. Febr. 1890. Leg. J. D. S.

2298. Rhynchosia longeracemosa, Mart. et Gal.

Aceituna, Depart. Guatemala, alt. 4,600 pp.

M. Febr. 1890. Leg. J. D. S.

2303. Rhynchosia minima, DC.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.

M. Febr. 1890. Leg. J. D. S.

2276. Rhynchosia.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Apr. 1890. Leg. J. D. S.

1708. Dalbergia Amerimnum, Benth.

Boca del Polochic, Depart. Yzabal, alt. 200 pp.

M. Apr. 1889. Leg. J. D. S.

2279. Swartzia grandiflora, Willd.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Apr. 1890. Leg. J. D. S.

2294. Cæsalpinia affinis, Hemsl.

Guatemala, Depart. Guatemala, alt. 4,800 pp.

M. Febr. 1890. Leg. J. D. S.

1705. Cæsalpinia pulcherrima, Swz.

Yzabal, Depart. Yzabal, alt. 120 pp.

M. Apr. 1889. Leg. J. D. S.

1422. Cassia biflora, L.

Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.

M. Sept. 1888. Leg. H. von Türckheim.

2288. Cassia biflora, L.

San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2290. Cassia biflora, L.

Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

442. Cassia leiophylla, Vogel.?

Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Maj. 1879. Leg. H. von Türckheim.

1789. Cassia leiophylla, Vogel.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2293. Cassia nictitans, L.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1780. Cassia reticulata, Willd.

Yzabal, Depart. Yzabal, alt. 120 pp.
M. Apr. 1889. Leg. J. D. S.

2289. Cassia reticulata, Willd.

San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

1631. Bauhinia Pansamalana.

Botan. Gaz. xii. 27.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1632. Bauhinia Rubelcruziana.

Botan. Gaz. xiii. 27.
Panzos, Depart. Alta Verapaz, alt. 450 pp.
M. Maj. 1889. Leg. J. D. S.

1735. Mimosa asperata, L.

Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2310. Mimosa asperata, L.

Rio Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2307. Mimosa floribunda, Willd.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2306. Acacia Farnesiana, Willd.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2304. Acacia Hindsii, Benth.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2305. Acacia spadicigera, Cham. et Schl.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2273. Lysiloma aurita, Benth.

Santa Lucia, Depart. Zacatepequez, alt. 5,300 pp.
M. Apr. 1890. Leg. J. D. S.

2282. Anneslea Portoricensis.

(*Calliandra Portoricensis, Benth.*)
San Juan Mixtan, Depart. Escuintla, alt. 500 pp.
M. Apr. 1890. Leg. J. D. S.

1733. Pithecolobium sophorocarpum, Benth.

Yzabal, Depart. Yzabal, alt. 200 pp.
M. Apr. 1889. Leg. J. D. S.

2284. Enterolobium cyclocarpum, Griseb.

Cuyuta, Depart. Escuintla, alt. 200 pp.
M. Apr. 1890. Leg. J. D. S.

2316. Inga eriocarpa, Benth.

Guarda Viejo, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2317. Inga spuria, Willd.?

San Juan Mixtan, Depart. Escuintla, alt. 500 pp.
M. Apr. 1890. Leg. J. D. S.

1673. Inga vera, Willd.

Boca del Cahabon, Depart. Yzabal, alt. 350 pp.
1889. Leg. J. D. S.

1804. Chrysobalanus Icaco, L.

Boca del Polochic, Depart Yzabal, alt. 200 pp.
M. Apr. 1889. Leg. J. D. S.

1812. Hirtella racemosa, Lam.

(*H. Americana, Aubl.; L.?*)
Yzabal, Depart. Yzabal, alt. 150 pp.
M. Apr. 1889. Leg. J. D. S.

1904. Rubus adenotrichus, Cham. et Schl.
Guatemala, Depart. Guatemala, alt. 4,400 pp.
M. Febr. 1890. Leg. J. D. S.

1972. Rubus adenotrichus, Cham. et Schl.
Sapote, Depart. Guatemala, alt. 4,300 pp.
M. Mart. 1890. Leg. J. D. S.

2141. Rubus coriifolius, Liebm.
determ. Focke.
San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

1622. Rubus eriocarpus, Liebm.
Tres Cruces, Depart. Alta Verapaz, alt. 4,800 pp.
M. Apr. 1889. Leg. J. D. S.

1623. Rubus floribundus, H. B. K.
Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2168. Rubus occidentalis, L.,
var. grandiflora, Focke.
Botan. Gaz. xvi. 3.
Volcan de Agua, Depart. Zacatepequez, alt. 8,500 pp.
M. Apr. 1890. Leg. J. D. S.

1424. Rubus sapidus, Cham. et Schl.,
forma grandifolia.
determ. Focke.
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Sept. 1888. Leg. H. von Türckheim.

2144. Potentilla Donnell-Smithii, Focke.
Botan. Gaz. xvi. 3.
Volcan de Agua, Depart. Zacatepequez, alt. 12,000 pp.
M. Apr. 1890. Leg. J. D. S.

2158. Alchemilla sibbaldiæfolia, H. B. K.
Volcan de Agua, Depart. Zacatepequez, alt. 12,000 pp.
M. Apr. 1890. Leg. J. D. S.

1783. Alchemilla venusta, Cham. et Schl.
Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

1409. Agrimonia parviflora, Ait.,
var. macrocarpa, Focke.
Botan. Gaz. xvi. 3.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Feb. 1889. Leg. H. von Türckheim.

1855. Liquidambar styraciflua, L.

Chicoyonito, Depart. Alta Verapaz, alt. 4,400 pp.
M. Apr. 1889. Leg. J. D. S.

1751. Rhizophora Mangle, L.

Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1707. Combretum Jacquini, Griseb.

Boca del Polochic, Depart. Yzabal, alt. 200 pp.
M. Apr. 1889. Leg. J. D. S.

1646. Cacoucia coccinea, Aubl.

Yzabal, Depart. Yzabal, alt. 150 pp.
M. Apr. 1889. Leg. J. D. S.

1757. Pimenta officinalis, Berg.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1944. Eugenia Jambos, L.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Mart. 1890. Leg. J. D. S.

1725. Eugenia Jambos, L.

Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2066. Eugenia Xalapensis, DC.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2213. Centradenia floribunda, Planch.

determ. Cogniaux.

Guatemala, Depart. Guatemala, alt. 4,800 pp.
M. Febr. 1890. Leg. J. D. S.

2216. Centradenia floribunda, Planch.

determ. Cogniaux.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1540. Centradenia grandifolia, Endl.

Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1813. Acisanthera quadrata, Juss.

Yzabal, Depart. Yzabal, alt. 120 pp.
M. Apr. 1889. Leg. J. D. S.

1514. Tibouchina Bourgæana, Cogn.
Botan. Gaz. xvi. 4.
Yzabal, Depart. Yzabal, alt. 100 pp.
M. Apr. 1889. Leg. J. D. S.

2211. Tibouchina Bourgæana, Cogn.
Botan. Gaz. xvi. 4.
Masagua, Depart. Escuintla, alt. 400 pp.
M. Apr. 1890. Leg. J. D. S.

2217. Monochætum diffusum, Cogn.
Botan. Gaz. xvi. 4.
Pinula, Depart. Guatemala, alt. 4,300 pp.
M. Febr. 1890. Leg. J. D. S.

1528. Triolæna paleolata.
Botan. Gaz. xii. 28.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

2210. Leandra melanodesma, Cogn.,
var. sagittata, Cogn.
determ. Cogniaux.
San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

1522. Leandra Mexicana, Cogn.
determ. Cogniaux.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1527. Conostegia Xalapensis, D. Don.
determ. Cogniaux.
Yzabal, Depart. Yzabal, alt. 125 pp.
M. Apr. 1889. Leg. J. D. S.

2215. Conostegia Xalapensis, D. Don,
forma canescens.
determ. Cogniaux.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1524. Miconia æruginosa, Naud.
determ. Cogniaux.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1523. Miconia glaberrima, Naud.
determ. Cogniaux.
Sasis, Depart. Alta Verapaz, alt. 5,000 pp.
M. Apr. 1889. Leg. H. Helmrich.

1515. Miconia lacera, Naud.

determ. Cogniaux.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

1516. Miconia lacera, Naud.

determ. Cogniaux.

Yzabal, Depart. Yzabal, alt. 100 pp.

M. Apr. 1889. Leg. J. D. S.

2212. Miconia Schlimii, Triana.

determ. Cogniaux.

Concepcion, Depart. Escuintla, alt. 1,200 pp.

M. Apr. 1890. Leg. J. D. S.

2214. Miconia Schlimii, Triana.

determ. Cogniaux.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

1525. Miconia scorpioides, Naud.

determ. Cogniaux.

Yzabal, Depart. Yzabal, alt. 125 pp.

M. Apr. 1889. Leg. J. D. S.

1526. Miconia stenostachya, DC.

determ. Cogniaux.

Yzabal, Depart. Yzabal, alt. 150 pp.

M. Apr. 1889. Leg. J. D. S.

1519. Clidemia capitata, Benth.

determ. Cogniaux.

Yzabal, Depart. Yzabal, alt. 100 pp.

M. Apr. 1889. Leg. J. D. S.

1520. Clidemia capitata, Benth.

determ. Cogniaux.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

1435. Clidemia Donnell-Smithii, Cogn.

Botan. Gaz. xvi. 5.

Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.

M. Jul. 1888. Leg. H. von Türckheim.

1517. Clidemia hirta, Don,

var. elegans, Griseb.

determ. Cogniaux.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

1518. Clidemia hirta, D. Don,
var. elegans. Griseb.
determ. Cogniaux.
Yzabal, Depart. Yzabal, alt. 100 pp.
M. Apr. 1889. Leg. J. D. S.

1521. Clidemia petiolaris, Triana (part.)
determ. Cogniaux.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1513. Clidemia rubra, Mart.
determ. Cogniaux.
Yzabal, Depart. Yzabal, alt. 100 pp.
M. Apr. 1889. Leg. J. D. S.

1512. Topobea calycularis, Naud.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1204. Cuphea æquipetala, Cav.,
var. lævicaulis, Kœhne, forma b.
determ. Kœhne.
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Apr. 1887. Leg. H. von Türckheim.

2035. Cuphea Balsamona, Cham. et Schl.
determ. Kœhne.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1871. Cuphea Hookeriana, Walp.,
forma typica.
determ. Kœhne.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2185. Cuphea Hookeriana, Walp.,
forma typica.
determ. Kœhne.
San Lucas, Depart. Zacatepequez, alt. 5,500 pp.
M. Apr. 1890. Leg. J. D. S.

1913. Cuphea utriculosa, Kœhne,
var. Panamensis, Kœhne.
determ. Kœhne.
Aceituna, Depart. Guatemala, alt. 4,700 pp.
M. Febr. 1890. Leg. J. D. S.

2132. Lythrum maritimum, H. B. K.
determ. Kœhne.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1697. Jussiæa octonervia, Lam.

Boca del Polochic, Depart. Yzabal, alt. 200 pp.
M. Apr. 1889. Leg. J. D. S.

1987. Jussiæa octonervia, Lam.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2130. Jussiæa Peruviana, L., var. glaberrima.

Botan. Gaz. xvi. 6.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

2123. Jussiæa pilosa, H. B. K., var. robustior.

Botan. Gaz. xvi. 6.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

2149. Œnothera cuprea, Schlecht.

Volcan de Agua, Depart. Zacatepequez, alt. 11,500 pp.
M. Apr. 1890. Leg. J. D. S.

182. Fuchsia arborescens, Sims.

Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

2139. Fuchsia arborescens, Sims.

San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

2166. Fuchsia bacillaris, Lindl.

Volcan de Agua, Depart. Zacatepequez, alt. 9,500 pp.
M. Apr. 1890. Leg. J. D. S.

2176. Fuchsia corymbiflora, Ruiz et Pav.

San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

2174. Fuchsia splendens, Zucc.

Volcan de Agua, Depart. Zacatepequez.
M. Apr. 1890. Leg. J. D. S.

1423. Hauya elegans, Hemsl.

Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Sept. 1888. Leg. H. von Türckheim.

1681. Lopezia albiflora, Schlecht.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1858. Lopezia albiflora, Schlecht.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2007. Casearia corymbosa, H. B. K.
San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2073. Casearia corymbosa, H. B. K.
Cuyuta, Depart. Escuintla, alt. 200 pp.
M. Apr. 1890. Leg. J. D. S.

1820. Casearia Gærtneri.
(*Piparea multiflora, Gœrtn.*)
Yzabal, Depart. Yzabal, alt. 120 pp.
M. Apr. 1889. Leg. J. D. S.

2082. Casearia parvifolia, Willd.
Cuyuta, Depart. Escuintla, alt. 200 pp.
M. Apr. 1890. Leg. J. D. S.

888. Casearia parvifolia, Willd., forma monstrosa.
Mauriceo, Depart. Escuintla, alt. 600 pp.
M. Mart. 1886. Leg. H. von Türckheim.

1919. Passiflora alba, Link et Otto.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1425. Passiflora allantophylla, Mast.
Botan. Gaz. xvi. 7.
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Sept. 1888. Leg. H. von Türckheim.

1625. Passiflora clypeophylla, Mast.
Botan. Gaz. xvi. 6.
Barranca del Rubelcruz, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

2143. Passiflora dicthophylla, Mast.
Botan. Gaz. xvi. 8.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1948. Passiflora fœtida, L.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Mart. 1890. Leg. J. D. S.

1986. Passiflora fœtida, L.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2016. Passiflora fœtida, L, var. hastata, Mast.
Escuintla, Depart. Escuintla.
M. Mart. 1890. Leg. J. D. S.

1627. Passiflora ligularis, Juss.
Samac, Depart. Alta Verapaz, alt. 4,600 pp.
M. Apr. 1889. Leg. J. D. S.

1626. Passiflora macrocarpa, Mast.
Panzos, Depart. Alta Verapaz, alt. 450 pp.
M. Maj. 1889. Leg. J. D. S.

2136. Passiflora ornithoura, Mast.
Botan. Gaz. xvi. 8.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

686. Passiflora sexflora, Juss.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Aug. 1885. Leg. H. von Türckheim.

1624. Passiflora sexflora, Juss.
Tres Cruces, Depart. Alta Verapaz, alt. 4,800 pp.
M. Apr. 1889. Leg. J. D. S.

2083. Passiflora transversa, Mast.
Botan. Gaz. xvi. 7.
San Juan Mixtan, Depart. Escuintla, alt. 500 pp.
M. Apr. 1890. Leg. J. D. S.

2099. Passiflora transversa, Mast.
Botan. Gaz. xvi. 7.
Masagua, Depart. Escuintla, alt. 400 pp.
M. Apr. 1890. Leg. J. D. S.

2205. Luffa cylindrica, Rœm.
determ. Cogniaux.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2204. Momordica Charantia, L.,
var. abbreviata, Ser.
determ. Cogniaux.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

2203. Melothria Donnell-Smithii, Cogn.
Botan. Gaz. xvi. 9.
Masagua, Depart. Escuintla, alt. 400 pp.
M. Apr. 1890. Leg. J. D. S.

2206. Melothria Donnell-Smithii, Cogn., var. hirtella, Cogn.
Botan. Gaz. xvi. 9.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2208. Melothria Donnell-Smithii, Cogn., var. rotundifolia, Cogn.
Botan. Gaz. xvi. 9.
San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

1529. Melothria scabra, Naud.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1414. Anguria diversifolia, Cogn.
Botan. Gaz. xvi. 10.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Nov. 1888. Leg. H. von Türckheim.

1510. Anguria oblongifolia, Cogn.
Botan. Gaz. xvi. 9.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1511. Gurania Donnell-Smithii, Cogn.
Botan. Gaz. xvi. 10.
Rio Chactá, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

2209. Elaterium ciliatum, Cogn.
determ. Cogniaux.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2207. Elaterium gracile, Cogn.
determ. Cogniaux.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1509. Hanburia parviflora.
Botan. Gaz. xii. 299; xv. 27.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

2202. Sicyos longisepalus, Cogn.
Botan. Gaz. xvi. 2.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1859. Begonia heracleifolia, Cham. et Schl.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2128. Begonia Tovarensis, Klotzsch.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1856. Epiphyllum Hookeri, Haw.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1433. Epiphyllum latifrons, Zucc.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Jun. 1888. Leg. H. von Türckheim.

2040. Rhipsalis cassytha, Gærtn.
Torolá, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

74. Hydrocotyle leucocephala, Cham. et Schl.
determ. Coulter et Rose.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Maj. 1879. Leg. H. von Türckheim.

1776. Hydrocotyle leucocephala, Cham. et Schl.
determ. Coulter et Rose.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

493. Hydrocotyle prolifera, Kell.
determ. Coulter et Rose.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Maj. 1879. Leg. H. von Türckheim.

2200. Hydrocotyle prolifera, Kell.
determ. Coulter et Rose.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Mart. 1890. Leg. J. D. S.

2199. Eryngium Carlinæ, Delar.
determ. Coulter et Rose.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1687. Eryngium fœtidum, L.

Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2198. Eryngium fœtidum, L.

determ. Coulter et Rose.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2197. Eryngium pectinatum, Presl.

determ. Coulter et Rose.
San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg J. D. S.

2196. Arracacia Donnell-Smithii, Coulter et Rose.

Botan. Gaz. xv. 259. t. xv.
Volcan de Agua, Depart. Zacatepequez, alt. 11,000 pp.
M. Apr. 1890. Leg. J. D. S.

1311. Donnellsmithia Guatemalensis, Coulter et Rose.

Botan. Gaz. xv. 15. t. ii.
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Jul. 1887. Leg. H. von Türckheim.

2195. Ottoa œnanthoides, H. B. K.

determ. Coulter et Rose.
Volcan de Agua, Depart. Zacatepequez, alt. 12,000 pp.
M. Apr. 1890. Leg. J. D. S.

2018. Dendropanax arboreum, Planch. et Dcne.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1743. Oreopanax.

Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

2191. Sambucus Peruviana, H. B. K.

San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

1730. Viburnum glabratum, H. B. K.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1886. Bouvardia leiantha, Benth.

Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1277. Bouvardia longiflora, H. B. K.
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Jul. 1887. Leg. H. von Türckheim.

1439. Bouvardia longiflora, H. B. K.
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Sept. 1888. Leg. H. von Türckheim.

1761. Manettia cuspidata, Bertol.
Arenal, Depart. Alta Verapaz, alt. 3,000 pp.
M. Apr. 1889. Leg. J. D. S.

1872. Rondeletia cordata, Benth.
Guatemala, Depart. Guatemala, alt. 4,800 pp.
M. Febr. 1890. Leg. J. D. S.

2140. Rondeletia cordata, Benth.
San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

1741. Rondeletia gracilis, Hemsl.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1692. Rondeletia villosa, Hemsl.,
forma strigosissima.
Sasis, Depart. Alta Verapaz, alt. 5,000 pp.
M. Apr. 1889. Leg. H. Helmrich.

2051. Lindenia rivalis, Benth.
Rio Michatoya, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

725^{A}. Deppea tenuiflora, Benth.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Jun. 1885. Leg. H. von Türckheim.

1782. Coccocypselum canescens, Willd.
Santa Cruz, Depart. Alta Verapaz, alt. 4,600 pp.
M. Apr. 1889. Leg. J. D. S.

1756. Coccocypselum repens, Swz.
Monte Cachirulo, Depart. Yzabal, alt. 800 pp.
M. Apr. 1889. Leg. J. D. S.

1788. Hamelia lutea, Rohr.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1974. Hamelia patens, Jacq.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1444. Sommera arborescens, Schlecht.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Aug. 1888. Leg. H. von Türckheim.

1737. Sommera arborescens, Schlecht.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1822. Alibertia edulis, A. Rich.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1639. Posoqueria latifolia, Rœm. et Schult.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1985. Randia ovata, Duchass?
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

2061. Randia Xalapensis, Mart. et Gal.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2093. Guettarda odorata, Lam.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

1364. Psychotria.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1821. Psychotria.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2042. Psychotria.
Torolá, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2074. Psychotria.
Cuyuta, Depart. Escuintla, alt. 200 pp.
M. Apr. 1890. Leg. J. D. S.

1729. Palicourea triphylla, DC.
(*P. parviflora, Benth.* ad coll. Seemann 353!)
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1794. Palicourea triphylla, DC.
(*P. parviflora, Benth.* ad coll. Seemann 353!)
Yzabal, Depart. Yzabal, alt. 130 pp.
M. Apr. 1889. Leg. J. D. S.

1637. Cephaelis glomerulata.
Botan. Gaz. xvi. 12.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1636. Cephaelis tomentosa, Willd.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

518. Diodia sarmentosa, Swz.
Coban, Depart. Alta Verapaz, alt. 4,400 pp.
M. Aug. 1880. Leg. H. von Türckheim.

1773. Diodia sarmentosa, Swz.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1668. Crusea calocephala, DC.
Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1996. Crusea calocephala, DC.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1897. Spermacoce podocephala, A. Gray.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1796. Richardsonia scabra, St. Hil.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1900. Richardsonia scabra, St. Hil.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1970. Galium geminiflorum, Mart. et Gal.
Guatemala, Depart. Guatemala, alt. 4,600 pp.
M. Feb. 1890. Leg. J. D. S.

1596. Vernonia Aschenborniana, Schauer.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

420. Vernonia Deppeana, Less.
Coban, Depart. Alta Verapaz, alt. 4,400 pp.
M. Apr. 1879. Leg. H. von Türckheim.

2403. Vernonia Deppeana, Less.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2404. Vernonia Deppeana, Less.
determ. Coulter.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1610. Vernonia leiocarpa, DC.
determ. Coulter.
Santa Cruz, Depart. Alta Verapaz, alt. 4,600 pp.
M. Apr. 1889. Leg. J. D. S.

2405. Vernonia leiocarpa, DC.
determ. Coulter.
Pacaya, Depart. Amatitlan, alt. 5,800 pp.
M. Mart. 1890. Leg. J. D. S.

583. Vernonia Salvinæ, Hemsl.,
var. canescens, Coult. n. var. ined.
Coban, Depart. Alta Verapaz, alt. 4,800 pp.
M. Mart. 1881. Leg. H. von Türckheim.

2401. Vernonia Schiedeana, Less.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2377. Vernonia triflosculosa, H. B. K.
determ. Coulter.
San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2383. Elephantopus spicatus, B. Juss.
determ. Coulter.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2327. Stevia compacta, Benth.
determ. Coulter.
Volcan de Agua, Depart. Zacatepequez, alt. 9,000 pp.
M. Apr. 1890. Leg. J. D. S.

2326. Eupatorium azureum, DC.
determ. Coulter.
Volcan de Agua, Depart. Zacatepequez, alt. 9,000 pp.
M. Apr. 1890. Leg. J. D. S.

1602. Eupatorium Donnell-Smithii,
Coult. n. sp. ined.
Samac, Depart. Alta Verapaz, alt. 4,600 pp.
M. Apr. 1889. Leg. J. D. S.

1603. Eupatorium Donnell-Smithii,
Coult. n. sp. ined.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2329. Eupatorium Donnell-Smithii,
Coult. n. sp. ined.
Volcan de Agua, Depart. Zacatepequez, alt. 9,500 pp.
M. Apr. 1890. Leg. J. D. S.

2365. Eupatorium Donnell-Smithii,
Coult. n. sp. ined.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2374. Eupatorium Donnell-Smithii,
Coult. n. sp. ined.
Aceituna, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

2333. Eupatorium Donnell-Smithii, Coult.,
var. parvifolium, Coult. n. var. ined.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1599. Eupatorium leucocephalum, Benth.
Serraquitché, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

1894. Eupatorium leucocephalum, Benth.
Guatemala, Depart. Guatemala, alt. 4,600 pp.
M. Feb. 1890. Leg. J. D. S.

2393. Eupatorium lyratum, Coult. n. sp. ined.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Mart. 1890. Leg. J. D. S.

2399. Eupatorium populifolium, H. B. K.
determ. Coulter.
Cuyuta, Depart. Escuintla, alt. 200 pp.
M. Apr. 1890. Leg. J. D. S.

2400. Eupatorium populifolium, H. B. K.
determ. Coulter.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Mart. 1890. Leg. J. D. S.

2331. Eupatorium Rafaelense, Coult. n. sp. ined.
San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg J. D. S.

2368. Eupatorium Rafaelense, Coult. n. sp. ined.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2373. Eupatorium Schultzii, Sch. Bip.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2366. Mikania cordifolia, Willd.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

1604. Mikania scandens, Willd.
Yzabal, Depart. Yzabal, alt. 200 pp.
M. Apr. 1889. Leg. J. D. S.

2394. Mikania scandens, Willd.
determ. Coulter.
Masagua, Depart. Escuintla, alt. 400 pp.
M. Apr. 1890. Leg. J. D. S.

2402. Brickellia Cavanillesii, Gray.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2386. Brickellia diffusa, Gray.
determ. Coulter.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2389. Brickellia Pacayensis, Coult. n. sp. ined.
Pacaya, Depart. Amatitlan, alt. 6,000 pp.
M. Mart. 1890. Leg. J. D. S.

2407. Aphantostephus Pinulensis,
Coult. n. sp. ined.
Pinula, Depart. Guatemala, alt. 4,400 pp.
M. Febr. 1890. Leg. J. D. S.

2328. Aplopappus stoloniferus, DC., var. glabratus, Coult. n. var. ined.

Volcan de Agua, Depart. Zacatepequez, alt. 12,100 pp.
M. Apr. 1890. Leg. J. D. S.

2392. Aster exilis, Ell., var. australis, Gray.
determ. Coulter.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Mart. 1890. Leg. J. D. S.

1605. Erigeron mucronatus, DC.
determ. Coulter.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2391. Erigeron mucronatus, DC.
determ. Coulter.

Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2346. Baccharis rhexioides, H. B. K.
determ. Coulter.

Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2414. Baccharis rhexioides, H. B. K.
determ. Coulter.

Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

2343. Pluchea odorata, Cass.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2344. Pluchea odorata, Cass.
determ. Coulter.

Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

2348. Gnaphalium attenuatum, DC.
determ. Coulter.

Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2349. Gnaphalium oxyphyllum, DC.
determ. Coulter.

Volcan de Agua, Depart. Zacatepequez, alt. 9,000 pp.
M. Apr. 1890. Leg. J. D. S.

2410. Lagascea suaveolens, H. B. K.
determ. Coulter.

Aceituna, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

2347. Clibadium Donnell-Smithii, Coult. n. sp. ined.

Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2384. Polymnia maculata, Cav.
determ. Coulter.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2409. Baltimora Scolospermum, Steetz.
determ. Coulter.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2334. Melampodium brachyglossum, J. Donnell Smith.
determ. Coulter.

Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1613. Melampodium divaricatum, DC.
determ. Coulter.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1616. Melampodium divaricatum, DC.
determ. Coulter.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2338. Melampodium divaricatum, DC.
determ. Coulter.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2339. Melampodium divaricatum, DC.
determ. Coulter.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2382. Melampodium divaricatum, DC.
determ. Coulter.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

463. Tragoceros Schiedeanus, Less.

Salamá, Depart. Baja Verapaz, alt. 2,200 pp.
M. Sept. 1879. Leg. H. von Türckheim.

2411. Gymnolomia patens, Gray.
determ. Coulter.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2376. Sclerocarpus uniserialis, Hemsl.
determ. Coulter.
San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2352. Montanoa ovalifolia, DC.
determ. Coulter.
Pacaya, Depart. Amatitlan, alt. 6,000 pp.
M. Mart. 1890. Leg. J. D. S.

1592. Tetragonotheca Guatemalensis, Coult. n. sp. ined.
Senahú, Depart. Alta Verapaz, alt. 3,500 pp.
M. Apr. 1889. Leg. J. D. S.

1601. Wedelia carnosa, Rich.
determ. Coulter.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1615. Wedelia filipes, Hemsl.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2126. Wedelia filipes, Hemsl.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

2416. Wedelia filipes, Hemsl.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1607. Zexmenia Dulcis, Coult. n. sp. ined.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1412. Zexmenia elegans, Sch. Bip.
determ. Coulter.
Sacolal, Depart. Alta Verapaz, alt. 3,000 pp.
M. Jan. 1889. Leg. H. von Türckheim.

2371. Tithonia diversifolia, Gray.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Feb. 1890. Leg. J. D. S.

2412. Tithonia diversifolia, Gray.
determ. Coulter.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2380. Tithonia tagetiflora, Desv.
determ. Coulter.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2385. Tithonia tagetiflora, Desv.
determ. Coulter.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2390. Tithonia tubæformis, Cass.
determ. Coulter.
Pacaya, Depart. Amatitlan, alt. 5,800 pp.
M. Mart. 1890. Leg. J. D. S.

2341. Melanthera hastata, Rich.
determ. Coulter.
Rio Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Feb. 1890. Leg. J. D. S.

2342. Melanthera hastata, Rich.
determ. Coulter.
Pinula, Depart. Guatemala, alt. 4,400 pp.
M. Febr. 1890. Leg. J. D. S.

2408. Encelia Mexicana, Mart.
determ. Coulter.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2378. Verbesina gigantea, Jacq.
determ. Coulter.
San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

1608. Podachænium paniculatum, Benth.
determ. Coulter.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

2388. Podachænium paniculatum, Benth.
determ. Coulter.
Rio Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2125. Spilanthes Beccabunga, DC.
determ. Coulter.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1604. Spilanthes repens, Michx.
determ. Coulter.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2379. Salmea grandiceps, Cass.
determ. Coulter.
Sapote, Depart. Guatemala, alt. 4,300 pp.
M. Mart. 1890. Leg. J. D. S.

2413. Synedrella vialis, Gray.
determ. Coulter.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2367. Electra Galeottii, Gray.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1611. Dahlia variabilis, Desf.
determ. Coulter.
Senahú, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

1612. Dahlia variabilis, Desf.
determ. Coulter.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

2354. Bidens Antiguensis, Coult. n. sp. ined.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

2375. Bidens Antiguensis, Coult. n. sp. ined.
San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Apr. 1890. Leg. J. D. S.

2330. Bidens daucifolia, DC.?
determ. Coulter.
Volcan de Agua, Depart. Zacatepequez, alt. 11,000 pp.
M. Apr. 1890. Leg. J. D. S.

2351. Bidens heterosperma, Gray.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2350. Bidens pilosa, L.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2353. Bidens pilosa, L.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2372. Galinsoga parviflora, Cav.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

2337. Calea axillaris, DC.
determ. Coulter.
Rio Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2332. Calea integrifolia, Hemsl.
determ. Coulter.
San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

2345. Calea integrifolia, Hemsl.
determ. Coulter.
Guarda Viejo, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2370. Tridax procumbens, L.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2406. Dysodia grandiflora, DC.
determ. Coulter.
Pacaya, Depart. Amatitlan, alt. 5,800 pp.
M. Mart. 1890. Leg. J. D. S.

2369. Syncephalanthus decipiens, Bartl.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2395. Tagetes patula, L.
determ. Coulter.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2398. Tagetes patula, L.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2336. Tagetes tenuifolia, Cav.
determ. Coulter.
Aceituna, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

2397. Tagetes tenuifolia, Cav.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1597. Liabum andromachioides, Hemsl.
determ. Coulter.
Arenal, Depart. Alta Verapaz, alt. 4,000 pp.
M. Apr. 1889. Leg. J. D. S.

2355. Liabum discolor, Hemsl.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1594. Neurolæna lobata, R. Br.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2387. Neurolæna lobata, R. Br.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2362A. Senecio Aschenbornianus, Schauer.
determ. Coulter.
Volcan de Agua, Depart. Zacatepequez, alt. 11,000 pp.
M. Apr. 1890. Leg. J. D. S.

1591. Senecio Berlandieri, Hemsl.
determ. Coulter.
Boca Nueva, Depart. Alta Verapaz, alt. 400 pp.
M. Apr. 1889. Leg. J. D. S.

2381. Senecio calocephalus, Hemsl.
determ. Coulter.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1158. Senecio Cobanensis, Coult. n. sp. ined.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Mart. 1887. Leg. H. von Türckheim.

2362. Senecio Donnell-Smithii, Coult. n. sp. ined.
Volcan de Agua, Depart. Zacatepequez, alt. 11,000 pp.
M. Apr. 1890. Leg. J. D. S.

1598. Senecio Ghiesbreghtii, Hort. Hal. Regel.
determ. Coulter.
Serraquitché, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

1606. Senecio Ghiesbreghtii, Hort. Hal. Regel,
var. pauciflorus, Coult. n. var. ined.
Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

2359. Senecio Ghiesbreghtii, Hort. Hal. Regel,
var. pauciflorus, Coult. n. var. ined.
Sapote, Depart. Guatemala, alt. 4,300 pp.
M. Mart. 1890. Leg. J. D. S.

1595. Senecio grandifolius, Less.
determ. Coulter.
Tamajú, Depart. Alta Verapaz, alt. 4,000 pp.
M. Apr. 1889. Leg. J. D. S.

2356. Senecio kermesinus, Hemsl.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2360. Senecio mulgediifolius, Schauer.
determ. Coulter.
Volcan de Agua, Depart. Zacatepequez, alt. 11,800 pp.
M. Apr. 1890. Leg. J. D. S.

1609. Senecio Petasitis, DC.
determ. Coulter.
Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

2358. Senecio Petasitis, DC.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2361. Senecio purpurascens, Klatt.
determ. Coulter.
Volcan de Agua, Depart. Zacatepequez, alt. 11,000 pp.
M. Apr. 1890. Leg. J. D. S.

2357. Senecio salignus, DC.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2335. Cnicus Mexicanus, Hemsl.
determ. Coulter.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1593. Cnicus Mexicanus, Hemsl., forma.
determ. Coulter.
Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

2336. Cnicus subcoriaceus, Hemsl.
determ. Coulter.
Volcan de Agua, Depart. Zacatepequez, alt. 11,000 pp.
M. Apr. 1890. Leg. J. D. S.

2340. Cnicus subcoriaceus, Hemsl.
determ. Coulter.
Pacaya, Depart. Amatitlan, alt. 6,000 pp.
M. Mart. 1890. Leg. J. D. S.

2364. Perezia nudicaulis, Gray.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2363. Trixis frutescens, P. Browne.
determ. Coulter.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2415. Trixis frutescens, P. Browne.
determ. Coulter.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1640. Isotoma longiflora, Presl.
Panzos, Depart. Alta Verapaz, alt. 450 pp.
M. Maj. 1889. Leg. J. D. S.

1582. Lobelia Cliffortiana, L.
Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1618. Lobelia Cliffortiana, L.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1732. Lobelia fulgens, Willd.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1861. Lobelia laxiflora, H. B. K.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2173. Lobelia laxiflora, H. B. K., var. insignis.
Botan. Gaz. xvi. 12.
Volcan de Agua, Depart. Zacatepequez, alt. 10,000 pp.
M. Apr. 1890. Leg. J. D. S.

2106. Lobelia Türckheimii, Vatke.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1925. Heterotoma lobelioides, Zucc.
Pinula, Depart. Guatemala, alt. 4,200 pp.
M. Febr. 1890. Leg. J. D. S.

1332. Macleania cordata, Lemaire, var. linearifolia.

Botan. Gaz. xvi. 12.

Pansamalá, Depart. Alta Verapaz, alt. 4,000 pp.

M. Jul. 1887. Leg. H. von Türckheim.

2190. Arctostaphylos longifolia, Benth.

San Lucas, Depart. Zacatepequez, alt. 5,500 pp.

M. Apr. 1890. Leg. J. D. S.

2159. Arctostaphylos pungens, HBK., (nec Gray), var. cratericola.

Botan. Gaz. xvi. 13.

Volcan de Agua, Depart. Zacatepequez, alt. 12,100 pp.

M. Apr. 1890. Leg. J. D. S.

1691. Gaultheria hirtiflora, Benth.

Sasis, Depart. Alta Verapaz, alt. 5,000 pp.

M. Apr. 1889. Leg. H. Helmrich.

2150. Gaultheria odorata, HBK.

Volcan de Agua, Depart. Zacatepequez, alt. 11,000 pp.

M. Apr. 1890. Leg. J. D. S.

1942. Clethra lanata, Mart. et Gal.

Pacaya, Depart. Amatitlan, alt. 5,500 pp.

M. Mart. 1890. Leg. J. D. S.

1537. Parathesis crenulata, Hook. f.

Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.

M. Apr. 1889. Leg. J. D. S.

2117. Parathesis crenulata, Hook. f.

Concepcion, Depart. Escuintla, alt. 1,200 pp.

M. Apr. 1890. Leg. J. D. S.

1693. Parathesis melanosticta, Hemsl.

Sasis, Depart. Alta Verapaz, alt. 5,000 pp.

M. Apr. 1889. Leg. H. Helmrich.

1706. Parathesis melanosticta, Hemsl.

Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.

M. Apr. 1889. Leg. J. D. S.

1443. Parathesis sessilifolia. n. sp. ined.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.

M. Aug. 1888. Leg. H. von Türckheim.

1442. Parathesis.

Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.

M. Sept. 1888. Leg. H. von Türckheim.

1906. Ardisia compressa, H. B. K.

Guarda Viejo, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1989. Ardisia compressa, H. B. K.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2056. Ardisia pellucida, Œrst.

Torolá, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2184. Bumelia persimilis, Hemsl.

San Lucas, Depart. Zacatepequez, alt. 5,500 pp.
M. Apr. 1890. Leg. J. D. S.

1690. Styrax Guatemalensis.

Botan. Gaz. xv. 27.
Sasis, Depart. Alta Verapaz, alt. 5,000 pp.
M. Apr. 1889. Leg. H. Helmrich.

2266. Styrax punctatum, DC.

Guatemala, Depart. Guatemala, alt. 4,800 pp.
M. Febr. 1890. Leg. J. D. S.

1809. Allamanda cathartica, L.

Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2092. Thevetia plumeriæfolia, Benth.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

1893. Plumeria acutifolia, Poir.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2021. Plumeria acutifolia, Poir.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1921. Plumeria megaphylla, A. DC.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1920. Plumeria rubra, L.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1790. Tabernæmontana citrifolia, Jacq., forma.
(=169 Hart, San Andreas, Panamá.)
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2404. Tabernæmontana.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2405. Tabernæmontana.
San Juan Mixtan, Depart. Escuintla, alt. 500 pp.
M. Apr. 1890. Leg. J. D. S.

1748. Tabernæmontana.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1800. Stemmadenia bignoniæflora, Miers.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1225. Prestonia macrocarpa, Hemsl.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Aug. 1887. Leg. H. von Türckheim.

1275. Echites tubiflora, Mart. et Gal.?
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Jul. 1887. Leg. H. von Türckheim.

1746. Mandevilla fluminensis.
(*Amblyanthera fluminensis, Müll. Arg.*)
Rio Chacate, Depart. Alta Verapaz, alt. 1,300 pp.
M. Apr. 1889. Leg. J. D. S.

1734. Philibertia crassifolia, Hemsl.
Boca del Polochic, Depart. Yzabal, alt. 200 pp.
M. Apr. 1889. Leg. J. D. S.

1940. Philibertia Cumanensis, Hemsl.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1884. Philibertia odorata, Hemsl.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1910. Asclepias Curassavica, L.
Aceituna, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

1896. Asclepias rosea, H. B. K.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2138. Lachnostoma lasiostemma, Hemsl.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1500. Fimbristemma calycosa. n. sp. ined.
Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

1742. Nephradenia fruticosa. n. sp. ined.
Barranca del Rubelcruz, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

881. Gelsemium sempervirens, Ait.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Mart. 1886. Leg. H. von Türckheim.

2120. Buddleia Americana, L.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1628. Buddleia floribunda, H. B. K.?
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1895. Buddleia Humboldtiana, Rœm. et Sch.
Guatemala, Depart. Guatemala, alt. 4,800 pp.
M. Febr. 1890. Leg. J. D. S.

2148. Buddleia lanceolata, Benth.
Volcan de Agua, Depart. Zacatepequez, alt. 10,000 pp.
M. Apr. 1890. Leg. J. D. S.

360. Lisianthus acutangulus, Ruiz et Pav.
Sesisp, Depart. Alta Verapaz, alt. 3,000 pp.
M. Jan. 1888. Leg. H. von Türckheim.

1436. Leianthus saponarioides, Griseb.
Sacolal, Depart. Alta Verapaz, alt. 3,000 pp.
M. Jan. 1889. Leg. H. von Türckheim.

1647. Erythræa divaricata, Schaffn.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2170. Halenia gracilis, Griseb.
Volcan de Agua, Depart. Zacatepequez, alt. 11,500 pp.
M. Apr. 1890. Leg. J. D. S.

1864. Lœselia glandulosa, Don.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Feb. 1890. Leg. J. D. S.

2119. Lœselia glandulosa, Don.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1935. Lœselia involucrata, Don.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1860. Wigandia Caracasana, H. B. K.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1638. Wigandia Caracasana, H. B. K.,
forma viscosa.
Serraquitché, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

1654. Hydrolea spinosa, L.
Yzabal, Depart. Yzabal, alt. 120 pp.
M. Apr. 1889. Leg. J. D. S.

1695. Cordia ferruginea, Rœm. et Schult.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1701. Cordia ferruginea, Rœm. et Schult.
La Tinta, Depart. Alta Verapaz, alt. 600 pp.
M. Apr. 1889. Leg. J. D. S.

2025. Cordia Gerascanthus, Jacq.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1802. Bourreria grandiflora, Bertol.
Coban, Depart. Alta Verapaz, alt. 4,600 pp.
M. Apr. 1889. Leg. J. D. S.

1797. Heliotropium inundatum, Swz.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1952. Heliotropium inundatum, Swz.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Mart. 1890. Leg. J. D. S.

2017. Ipomœa Bona-nox, L.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1999. Ipomœa fastigiata, Sweet.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2222. Ipomœa fastigiata, Sweet.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1437. Ipomœa longipes, Garcke.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Aug. 1888. Leg. H. von Türckheim.

1863. Ipomœa murucoides, Rœm. et Sch.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1874. Ipomœa peduncularis, Bertol.
Aceituna, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

1969. Ipomœa peduncularis, Bertol.
Rio Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Mart. 1890. Leg. J. D. S.

2014. Ipomœa Purga, Hayne.
San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2034. Ipomœa Quamoclit, L.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2086. Ipomœa quinquefolia, Griseb.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

2280. Ipomœa quinquefolia, Griseb.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1990. Ipomœa umbellata, G. F. W. Mey.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

29A. Evolvulus linifolius, L.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1879. Leg. H. von Türckheim.

1912. Cuscuta corymbosa, Ruiz et Pav., var. grandiflora, Engelm.

Aceituna, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

1703. Solanum callicarpæfolium, Kth. et Bouché.

Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2261. Solanum Donnell-Smithii, Coult. n. sp. ined.

Concepcion, Depart. Escuintla, alt. 1,200 pp.
M. Apr. 1890. Leg. J. D. S.

2262. Solanum Donnell-Smithii, Coult. n. sp. ined.

San Juan Mixtan, Depart. Escuintla, alt. 500 pp.
M. Apr. 1890. Leg. J. D. S.

2268. Solanum Donnell-Smithii, Coult. n. sp. ined.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2265. Solanum lentum, Cav.

determ. Coulter.
San Juan Mixtan, Depart. Escuintla, alt. 500 pp.
M. Apr. 1890. Leg. J. D. S.

1841. Solanum nudum, H. B. K.

determ. Coulter.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1785. Solanum olivæforme.

Botan. Gaz. xiv. 28; xv. 28; xvi. 13. t. ii.
Barranca del Rubelcruz, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

1434. Solanum piliferum, Benth.

determ. Coulter.
Patal, Depart. Alta Verapaz, alt. 5,000 pp.
M. Sept. 1888. Leg. H. von Türckheim.

1839. Solanum Seaforthianum, Andr.?

determ. Coulter.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

1836. Solanum suaveolens, Kth. et Bouché?

determ. Coulter.

Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.

M. Apr. 1889. Leg. J. D. S.

1704. Solanum Tequilense, A. Gray.

determ. Coulter.

Yzabal, Depart. Yzabal, alt. 120 pp.

M. Apr. 1889. Leg. J. D. S.

1771. Solanum torvum, Swz.

determ. Coulter.

Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.

M. Apr. 1889. Leg. J. D. S.

1840. Solanum torvum, Swz.

determ. Coulter.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

2260. Solanum torvum, Swz.

determ. Coulter.

Antigua, Depart. Zacatepequez, alt. 5,000 pp.

M. Apr. 1890. Leg. J. D. S.

2269. Solanum torvum, Swz.

determ. Coulter.

Guarda Viejo, Depart. Guatemala, alt. 5,000 pp.

M. Febr. 1890. Leg. J. D. S.

2271. Solanum torvum, Swz.

determ. Coulter.

Guatemala, Depart. Guatemala, alt. 5,000 pp.

M. Febr. 1890. Leg. J. D. S.

436. Solanum triste, Jacq.

Rio Ainal, Depart. Alta Verapaz, alt. 4,400 pp.

M. Maj. 1879. Leg. H. von Türckheim.

2259. Solanum verbascifolium, L.

determ. Coulter.

Antigua, Depart. Zacatepequez, alt. 5,000 pp.

M. Apr. 1890. Leg. J. D. S.

2264. Solanum verbascifolium, L.

determ. Coulter.

Masagua, Depart. Escuintla, alt. 400 pp.

M. Apr. 1890. Leg. J. D. S.

2263. Solanum.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

1838. Athenæa.
Serraquitché, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

2089. Physalis gracilis, Miers.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

2258. Bassovia Donnell-Smithii, Coult. n. sp. ined.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

2270. Bassovia Donnell-Smithii, Coult. n. sp. ined.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1438. Bassovia Mexicana, Robinson, n. sp. ined., var. latifolia, Coult. et Robinson, n. var. ined.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Jan. 1889. Leg. H. von Türckheim.

1842. Bassovia Mexicana, Robinson, n. sp. ined., var. latifolia, Coult. et Robinson, n. var. ined.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

2267. Brachistus Escuintlensis, Coult. n. sp. ined.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1837. Brachistus.
Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

29. Datura arborea, L.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1879. Leg. H. von Türckheim.

1878. Datura arborea, L.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

18. Datura Tatula, L.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Jan. 1878. Leg. H. von Türckheim.

2133. Cestrum alaternoides, Desf.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1916. Cestrum dumetorum, Schlecht.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1870. Cestrum lanatum, Mart. et Gal.?
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Feb. 1890. Leg. J. D. S.

2124. Cestrum lanatum, Mart. et Gal.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1672. Cestrum nocturnum, L.
Teleman, Depart. Alta Verapaz, alt. 500 pp.
M. Apr. 1889. Leg. J. D. S.

1971. Cestrum nocturnum, L.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

26A. Cestrum persicæfolium, Dun.?
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Dec. 1877. Leg. H. von Türckheim.

2081. Cestrum vespertinum, L.
Cuyuta, Depart. Escuintla, alt. 200 pp.
M. Apr. 1890. Leg. J. D. S.

2179. Nicotiana plumbaginifolia, Jacq.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1876. Browallia demissa, L.
Guatemala, Depart. Guatemala, alt. 4,800 pp.
M. Febr. 1890. Leg. J. D. S.

1657. Calceolaria Mexicana, Benth.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

476. Maurandia scandens, A. Gray (nec Pers.)
Rio Coban, Depart. Alta Verapaz, alt. 4,400 pp.
M. Nov. 1879. Leg. H. von Türckheim.

2181. Maurandia semperflorens, Ort.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

2151. Pentstemon gentianoides, Don.
Volcan de Agua, Depart. Zacatepequez, alt. 11,000 pp.
M. Apr. 1890. Leg. J. D. S.

1641. Russellia juncea, Zucc.
Samac, Depart. Alta Verapaz, alt. 4,600 pp.
M. Apr. 1889. Leg. J. D. S.

1642. Russellia sarmentosa, Jacq.
Serraquitché, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

1961. Russellia sarmentosa, Jacq., forma furfuracea.
Pacaya, Depart. Amatitlan, alt. 4,500 pp.
M. Mart. 1890. Leg. J. D. S.

2127. Mimulus glabratus, H. B. K.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

2192. Mimulus glabratus, H. B. K.
San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

1862. Castilleja communis, Benth.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2146. Castilleja pectinata, Mart. et Gal.
Volcan de Agua, Depart. Zacatepequez, alt. 12,200 pp.
M. Apr. 1890. Leg. J. D. S.

2162. Lamourouxia dependens, Benth.
Volcan de Agua, Depart. Zacatepequez, alt. 9,000 pp.
M. Apr. 1890. Leg. J. D. S.

1926. Lamourouxia viscosa, H. B. K.
Pinula, Depart. Guatemala, alt. 4,400 pp.
M. Febr. 1890. Leg. J. D. S.

1109. Pinguicula.

San Pedro Garchá, Depart. Alta Verapaz, alt. 3,000 pp.
M. Jan. 1887. Leg. H. von Türckheim.

725. Achimenes coccinea, Pers.

Barranca del Rubelcruz, Depart. Alta Verapaz, alt. 3,000 pp.
M. Sept. 1886. Leg. H. von Türckheim.

1866. Isoloma Deppeanum, Hemsl.

Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1867. Isoloma Deppeanum, Hemsl.

Pinula, Depart. Guatemala, alt. 4,300 pp.
M. Febr. 1890. Leg. J. D. S.

1865. Isoloma Schiedeanum, Hemsl.

Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1868. Isoloma Schiedeanum, Hemsl.

Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1501. Campanea picturata.

Botan. Gaz. xv. 28. t. iii.

Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

731. Solenophora erubescens. n. sp. ined.

Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Maj. 1887. Leg. H. von Türckheim.

1684. Solenophora erubescens, n. sp. ined.

Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1080. Alloplectus strigosus, Hanst.

Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Maj. 1887. Leg. H. von Türckheim.

1700. Besleria acutifolia, Hanst.

Panzos, Depart. Alta Verapaz, alt. 440 pp.
M. Apr. 1889. Leg. J. D. S.

1798. Besleria Pansamalana. n. sp. ined.

Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1721. Bignonia æquinoctialis, L.
Boca del Polochic, Depart Yzabal, alt. 200 pp.
M. Apr. 1889. Leg. J. D. S.

2048. Bignonia laurifolia, Vahl.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2054. Bignonia unguis, L.
Torolá, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

1720. Bignonia.
Boca del Polochic, Depart. Yzabal, alt. 200 pp.
M. Apr. 1889. Leg. J. D. S.

1918. Tecoma stans, Juss.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2096. Crescentia Cujete, L.
Masagua, Depart. Escuintla, alt. 400 pp.
M. Apr. 1890. Leg. J. D. S.

1030. Mendoncia cleistophylla. n. sp. ined.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Aug. 1886. Leg. H. von Türckheim.

1982. Elytraria tridentata, Vahl.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1934. Ruellia albicaulis, Bertero.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1369. Ruellia.
Chajrax, Depart. Alta Verapaz, alt. 2,000 pp.
M. Feb. 1888. Leg. H. von Türckheim.

2015. Ruellia.
San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2115. Ruellia.
Concepcion, Depart. Escuintla, alt. 1,200 pp.
M. Apr. 1890. Leg. J. D. S.

1620. Louteridium Donnell-Smithii, Watson.
Proc. Am. Ac. xxiii. 284; xxiv. 85. Botan. Gaz. xiv. 27. t. vii.
Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

1621. Louteridium Donnell-Smithii, Watson.
Proc. Am. Ac. xxiii. 284; xxiv. 85. Botan. Gaz. xiv. 27. t. vii.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1993. Blechum Brownei, Juss.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1199. Eranthemum præcox, Benth.
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Apr. 1887. Leg. H. von Türckheim.

1976. Aphelandra pectinata, Willd.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1683. Beloperone Pansamalana.
Botan. Gaz. xiii. 75.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

2077. Beloperone violacea, Planch. et Lind., var. (*Justicia spathulata, Klotzsch.*)
San Juan Mixtan, Depart. Escuintla, alt. 500 pp.
M. Apr. 1890. Leg. J. D. S.

1877. Jacobinia aurea, Hemsl.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1883. Jacobinia Mohintli, Hemsl.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1806. Thyrsacanthus callistachyus, Nees.
Yzabal, Depart. Yzabal, alt. 150 pp.
M. Apr. 1889. Leg. J. D. S.

1727. Thyrsacanthus geminatus.
Botan. Gaz. xiii. 75.
Santa Cruz, Depart. Alta Verapaz, alt. 4,600 pp.
M. Apr. 1889. Leg. J. D. S.

1728. Thyrsacanthus geminatus.

Botan. Gaz. xiii. 75.

Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.

M. Apr. 1889. Leg. J. D. S.

1993. Thyrsacanthus tubæformis, Nees.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Apr. 1890. Leg. J. D. S.

2031. Thyrsacanthus tubæformis, Nees.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

501. Dicliptera mollis, Nees.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.

M. Apr. 1880. Leg. H. von Türckheim.

1923. Henrya imbricans. n. sp. ined.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.

M. Febr. 1890. Leg. J. D. S.

1749. Lantana Camara, L.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

1917. Lantana Camara, L.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.

M. Febr. 1890. Leg. J. D. S.

453. Lantana hispida, H. B. K.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.

M. Jun. 1879. Leg. H. von Türckheim.

460. Lantana hispida, H. B. K.

Sacoyohu, Depart. Alta Verapaz, alt. 3,500 pp.

M. Aug. 1879. Leg. H. von Türckheim.

1955. Lantana involucrata, L.

Pacaya, Depart. Amatitlan, alt. 5,500 pp.

M. Mart. 1890. Leg. J. D. S.

1754. Lantana trifolia, L.

Yzabal, Depart. Yzabal, alt. 120 pp.

M. Apr. 1889. Leg. J. D. S.

2062. Lippia geminata, H. B. K.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

1915. Lippia nodiflora, Michx.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1888. Lippia umbellata, Cav.

Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2006. Lippia umbellata, Cav.

Pinula, Depart. Guatemala, alt. 4,300 pp.
M. Febr. 1890. Leg. J. D. S.

1937. Lippia.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1753. Stachytarpheta Jamaicensis, Vahl.

Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1938. Stachytarpheta mutabilis, Vahl.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1702. Petræa volubilis, Jacq.

Chamiquin, Depart. Alta Verapaz, alt. 1,200 pp.
M. Apr. 1889. Leg. J. D. S.

1308. Citharexylum reticulatum, H. B. K.

Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Jul. 1887. Leg. H. von Türckheim.

1879. Citharexylum villosum, Jacq.

Pacaya, Depart. Amatitlan, alt. 5,500 pp.
M. Mart. 1890. Leg. J. D. S.

2111. Ægiphila elata, Swz.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

248. Cornutia grandifolia, Schauer.

Sacoyohu, Depart. Alta Verapaz, alt. 4,000 pp.
M. Jun. 1879. Leg. H. von Türckheim.

2012. Clerodendron fragrans, Vent.

San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

1739. Catopheria capitata, Benth.
Barranca del Rubelcruz, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

1740. Catopheria capitata, Benth.
Serraquitché, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

1887. Marsypianthes hyptoides, Mart.
Guarda Viejo, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1799. Hyptis atrorubens, Poit.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2009. Hyptis brevipes, Poit.
San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

1770. Hyptis capitata, Jacq.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

359. Hyptis lappacea, Benth.
Chiacam, Depart. Alta Verapaz, alt. 2,500 pp.
M. Jan. 1879. Leg. H. von Türckheim.

485. Hyptis spicata, Poit.
Coban, Depart. Alta Verapaz, alt. 4,400 pp.
M. Jan. 1880. Leg. H. von Türckheim.

477. Hyptis urticoides, H. B. K.
Coban, Depart. Alta Verapaz, alt. 4,400 pp.
M. Dec. 1879. Leg. H. von Türckheim.

1898. Hyptis.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2164. Cunila leucantha, Benth.
Volcan de Agua, Depart. Zacatepequez, alt. 8,500 pp.
M. Apr. 1890. Leg. J. D. S.

1648. Micromeria Xalapensis, Benth.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2131. Micromeria Xalapensis, Benth.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1679. Salvia amethystina, Smith.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2187. Salvia amethystina, Smith.
San Lucas, Depart. Zacatepequez, alt. 5,500 pp.
M. Apr. 1890. Leg. J. D. S.

2157. Salvia cinnabarina, Mart. et Gal.
Volcan de Agua, Depart. Zacatepequez, alt. 8,500 pp.
M. Apr. 1890. Leg. J. D. S.

2169. Salvia Lindenii, Benth.
Volcan de Agua, Depart. Zacatepequez, alt. 9,000 pp.
M. Apr. 1890. Leg. J. D. S.

1911. Salvia lophantha, Benth.
Pinula, Depart. Guatemala, alt. 4,400 pp.
M. Febr. 1890. Leg. J. D. S.

2050. Salvia lophantha, Benth.
Aceituna, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

2108. Salvia privoides, Benth.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1666. Salvia purpurea, Cav.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1903. Salvia purpurea, Cav.
Pinula, Depart. Guatemala, alt. 4,300 pp.
M. Febr. 1890. Leg. J. D. S.

2107. Stachys agraria, Cham. et Schl.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

512. Stachys parvifolia, Mart. et Gal.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Jul. 1880. Leg. H. von Türckheim.

1801. Stachys parvifolia, Mart. et Gal.
Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2113. Leonurus Sibiricus, L.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

141. Teucrium inflatum, Swz.
Coban, Depart. Alta Verapaz, alt. 4,400 pp.
M. Apr. 1879. Leg. H. von Türckheim.

1767. Teucrium inflatum, Swz.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1768. Teucrium inflatum, Swz.
Chicoyonito, Depart. Alta Verapaz, alt. 4,400 pp.
M. Apr. 1889. Leg. J. D. S.

1731. Mirabilis Jalapa, L.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2019. Mirabilis Jalapa, L.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2045. Boerhaavia erecta, L.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1914. Boerhaavia viscosa, Lag. et Rodr.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2091. Pisonia aculeata, L.,
var. macranthocarpa. n. var. ined.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

2069. Neea psychotrioides. n. sp. ined.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1978. Chamissoa altissima, H. B. K.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2032. Achyranthes aspera, L.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1814. Telanthera obovata, Mart. et Gal.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1815. Telanthera Türckheimii, Vatke.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1977. Gomphrena decumbens, Jacq.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1922. Iresine celosioides, L.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2038. Rivina lævis, L.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2030. Petiveria alliacea, L.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1899. Phytolacca octandra, L.

Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

514. Polygonum acre, H. B. K.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Jul. 1880. Leg. H. von Türckheim.

1418. Polygonum acre, H. B. K.

Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Oct. 1888. Leg. H. von Türckheim.

1946. Polygonum acre, H. B. K.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Mart. 1890. Leg. J. D. S.

2103. Polygonum lapathifolium, L.

Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1997. Antigonum Guatimalense, Meisn.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2049. Marathrum fœniculaceum, H. B. K.
Rio Michatoya, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2063. Aristolochia grandiflora, Swz.
Cuyuta, Depart. Escuintla, alt. 200 pp.
M. Apr. 1890. Leg. J. D. S.

2064. Aristolochia grandiflora, Swz.
San Juan Mixtan, Depart. Escuintla, alt. 500 pp.
M. Apr. 1890. Leg. J. D. S.

2065. Aristolochia grandiflora, Swz.
Rio Michatoya, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

1649. Aristolochia maxima, L.,
forma (*A. geminiflora, H. B. K.*)
Matacui, Depart. Alta Verapaz, alt. 800 pp.
M. Apr. 1889. Leg. J. D. S.

2080. Aristolochia maxima, L.,
forma (*A. geminiflora, H. B. K.*)
San Juan Mixtan, Depart. Escuintla, alt. 500 pp.
M. Apr. 1890. Leg. J. D. S.

105. Piper aduncum, L.
determ. C. de Candolle.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1879. Leg. H. von Türckheim.

1901. Piper auritum, Kunth.
determ. C. de Candolle.
Guatemala, Depart. Guatemala, alt. 4,700 pp.
M. Febr. 1890. Leg. J. D. S.

1711. Piper auritum, Kunth,
var. amplifolium, C. DC.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2037. Piper auritum, Kunth,
var. amplifolium, C. DC.
determ. C. de Candolle.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1744. Piper flavidum, C. DC.

determ. C. de Candolle.

Barranca del Rubelcruz, Depart. Alta Verapaz, alt. 2,500 pp.

M. Apr. 1889. Leg. J. D. S.

1713. Piper hirsutum, Swz.

determ. C. de Candolle.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

2001. Piper Martensianum, C. DC.

determ. C. de Candolle.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

1714. Piper peltatum, L.

determ. C. de Candolle.

Yzabal, Depart. Yzabal, alt. 120 pp.

M. Apr. 1889. Leg. J. D. S.

2000. Piper tuberculatum, Jacq.

determ. C. de Candolle.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

434. Piper variabile, C. DC., n. var.

determ. C. de Candolle.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.

M. Maj. 1879. Leg. H. von Türckheim.

1712. Piper Yzabalanum, C. DC. n. sp. ined.

Boca del Polochic, Depart. Yzabal, alt. 200 pp.

M. Apr. 1889. Leg. J. D. S.

1664. Peperomia albidiflora, C. DC. n. sp. ined.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.

M. Apr. 1889. Leg. J. D. S.

1950. Peperomia chrysocarpa, C. DC.

determ. C. de Candolle.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.

M. Mart. 1890. Leg. J. D. S.

78. Peperomia Cobana, C. DC. n. sp. ined.

Coban, Depart. Alta Verapaz, alt. 4,600 pp.

M. Jun. 1879. Leg. H. von Türckheim.

1787. Peperomia distachya, A. Dietr.

Barranca del Rubelcruz, Depart. Alta Verapaz, alt. 2,500 pp.

M. Apr. 1889. Leg. J. D. S.

432. Peperomia Matlalucaensis, C. DC.
determ. C. de Candolle.

Senahú, Depart. Alta Verapaz, alt. 3,500 pp.
M. Apr. 1879. Leg. H. von Türckheim.

2075. Peperomia pellucida, Kunth.
determ. C. de Candolle.

Cuyuta, Depart. Escuintla, alt. 200 pp.
M. Apr. 1890. Leg. J. D. S.

1979. Peperomia Pichinchæ, C. DC.
determ. C. de Candolle.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1663. Peperomia reflexa, A. Dietr.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1504. Peperomia tenerrima, Miq.
determ. C. de Candolle.

Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

1430. Peperomia umbilicata, Ruiz et Pav.
determ. C. de Candolle.

Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Sept. 1888. Leg. H. von Türckheim.

1715. Siparuna riparia, A. DC.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1717. Siparuna riparia, A. DC.
Monte Cachirulo, Depart. Yzabal, alt. 800 pp.
M. Apr. 1889. Leg. J. D. S.

1716. Siparuna riparia, A. DC.,
var. Sumichrastii, A. DC.

Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1650. Misanteca Jürgensenii, Mez.
(*Nectandra limbata, Meisn.;* nec Nees.)
determ. Mez.

Matacui, Depart. Alta Verapaz, alt. 800 pp.
M. Apr. 1889. Leg. J. D. S.

1718. Persea Donnell-Smithii, Mez. n. sp. ined.
Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1941. Persea gratissima, Gærtn.

Pacaya, Depart. Amatitlan, alt. 5,500 pp.

M. Mart. 1890. Leg. J. D. S.

2095. Nectandra globosa, Mez.

(*N. vaga, Meisn.*)

determ. Mez.

Concepcion, Depart. Escuintla, alt. 1,200 pp.

M. Apr. 1890. Leg. J. D. S.

1039. Daphnopsis Tuerckheimiana.

Botan. Gaz. xvi. 13.

Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.

M. Sept. 1886. Leg. H. von Türckheim.

2029. Loranthus calyculatus, DC.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

2052. Loranthus calyculatus, DC.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Apr. 1890. Leg. J. D. S.

2055. Loranthus parviflorus, Swz.

Torolá, Depart. Escuintla, alt. 1,000 pp.

M. Mart. 1890. Leg. J. D. S.

2033. Loranthus polyrhizos, Mart.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

2039. Phoradendron latifolium, Griseb.

Torolá, Depart. Escuintla, alt. 1,000 pp.

M. Mart. 1890. Leg. J. D. S.

2097. Phoradendron robustissimum, Eichl.?

Masagua, Depart. Escuintla, alt. 400 pp.

M. Apr. 1890. Leg. J. D. S.

2072. Pedilanthus tithymaloides, Poit.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

1653. Euphorbia arenaria, H. B. K.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.

M. Apr. 1889. Leg. J. D. S.

1655. Euphorbia lancifolia, Schlecht.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.

M. Apr. 1889. Leg. J. D. S.

464. Phyllanthus lathyroides, H. B. K.,
var. commutatus, Müll. Arg.
Sacoyohu, Depart. Alta Verapaz, alt. 4,000 pp.
M. Oct. 1879. Leg. H. von Türckheim.

2322. Jatropha Curcas, L.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Apr. 1890. Leg. J. D. S.

1745. Jatropha urens, L.
Chicacoa, Depart. Alta Verapaz, alt. 3,500 pp.
M. Apr. 1889. Leg. J. D. S.

2079. Dalechampia scandens, L.,
var. trisecta, n. var. ined.
San Juan Mixtan, Depart. Escuintla, alt. 500 pp.
M. Apr. 1890. Leg. J. D. S.

1747. Mabea montana, Müll. Arg.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2183. Trema micrantha, Blume.
Santa Lucia, Depart. Zacatepequez, alt. 5,700 pp.
M. Apr. 1890. Leg. J. D. S.

2027. Dorstenia contrajerva, L.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2311. Dorstenia contrajerva, L.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Sept. 1890. Leg. A. Chapman.

1619. Dorstenia contrajerva, L.,
var. Houstoni, Bureau.
Chabanal, Depart. Alta Verapaz, alt. 600 pp.
M. Apr. 1889. Leg. J. D. S.

2011. Ficus Bonplandiana, Miq.?
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1930. Ficus Guatemalana, Miq.
(*F. gummifera, Bertol.?*)
Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Feb. 1890. Leg. J. D. S.

1945. Ficus Segoviæ, Miq.?

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Mart. 1890. Leg. J. D. S.

1675. Cecropia Humboldtiana, Klotzsch.

Chamiquin, Depart. Alta Verapaz, alt. 1,200 pp.
M. Apr. 1889. Leg. J. D. S.

2024. Cecropia Mexicana, Hemsl.

Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1931. Laportea Mexicana, Wedd.

Rio Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1775. Urera baccifera, Gaud., var. horrida, Wedd.

Yzabal, Depart. Yzabal, alt. 120 pp.
M. Apr. 1889. Leg. J. D. S.

2155. Urera baccifera, Gaud., var. horrida, Wedd.

Torolá, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

1889. Urera Caracasana, Griseb. var. tomentosa, Wedd.

Guatemala, Depart. Guatemala, alt. 4,700 pp.
M. Febr. 1890. Leg. J. D. S.

1670. Pilea microphylla, Liebm.

Chamché, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

1677. Bœhmeria caudata, Swz.

Senahú, Depart. Alta Verapaz, alt. 3,500 pp.
M. Apr. 1889. Leg. J. D. S.

1869. Bœhmeria ramiflora, Jacq., var. cuspidata, Wedd.

Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1645. Myriocarpa heterostachya.

Botan. Gaz. xii. 133; xiii. 29.

Pansamalá, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1644. Myriocarpa longipes, Liebm.,
var. Yzabalensis.
Botan. Gaz. xvi. 13.
Monte Cachirulo, Depart. Yzabal, alt. 900 pp.
M. Apr. 1889. Leg. J. D. S.

1933. Casuarina equisetifolia, Forst.
(*culta.*)
Rio Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2188. Alnus acuminata, H. B. K.
San Lucas, Depart. Zacatepequez, alt. 5,500 pp.
M. Apr. 1890. Leg. J. D. S.

1667. Carpinus Americanus, Michx.,
var. tropicalis.
Botan. Gaz. xv. 28.
Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1709. Quercus grandis, Liebm.
Samac, Depart. Alta Verapaz, alt. 4,600 pp.
M. Apr. 1889. Leg. J. D. S.

1710. Quercus nectandræfolia, Liebm.
Samac, Depart. Alta Verapaz, alt. 4,600 pp.
M. Apr. 1889. Leg. J. D. S.

1968. Quercus Segoviensis, Liebm.?
Sapote, Depart. Guatemala, alt. 4,400 pp.
M. Mart. 1890. Leg. J. D. S.

1967. Quercus Totutlensis, A. DC.
Sapote, Depart. Guatemala, alt. 4,400 pp.
M. Mart. 1890. Leg. J. D. S.

2186. Quercus.
San Lucas, Depart. Zacatepequez, alt. 5,500 pp.
M. Apr. 1890. Leg. J. D. S.

2189. Quercus.
San Lucas, Depart. Zacatepequez, alt. 5,500 pp.
M. Apr. 1890. Leg. J. D. S.

1954. Salix Humboldtiana, Willd.,
var. oxyphylla (Kunth), Anders.
determ. Bebb.
Rio Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Feb. 1890. Leg. J. D. S.

2118. Salix Humboldtiana, Willd., var. oxyphylla (Kunth), Anders.

determ. Bebb.

Dueñas, Depart. Zacatepequez, alt. 5,000 pp.

M. Apr. 1890. Leg. J. D. S.

2121. Salix Humboldtiana, Willd., var. oxyphylla (Kunth), Anders.

determ. Bebb.

Antigua, Depart. Zacatepequez, alt. 5,000 pp.

M. Apr. 1890. Leg. J. D. S.

1891. Cupressus Benthami, Endl.

Guatemala, Depart. Guatemala, alt. 5,000 pp.

M. Febr. 1890. Leg. J. D. S.

2182. Pinus Donnell-Smithii, Mast. n. sp. ined.

Volcan de Agua, Depart. Zacatepequez, alt. 12,300 pp.

M. Apr. 1890. Leg. J. D. S.

1827. Costus spicatus, Swz.

determ. Baker.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

2036. Costus spicatus, Swz.

determ. Baker.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

2044. Renealmia exaltata, Rosc.

determ. Baker.

Torolá, Depart. Escuintla, alt. 1,000 pp.

M. Mart. 1890. Leg. J. D. S.

1826. Calathea discolor, G. F. W. Mey.

determ. Baker.

Boca del Polochic, Depart Yzabal, alt. 200 pp.

M. Apr. 1889. Leg. J. D. S.

2076. Calathea discolor, G. F. W. Mey.

determ. Baker.

Cuyuta, Depart. Escuintla, alt. 200 pp.

M. Apr. 1890. Leg. J. D. S.

2028. Canna lutea, Rosc.?

determ. Baker.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

1830. Heliconia Bihai, L.

determ. Baker.

Monte Cachirulo, Depart. Yzabal, alt. 700 pp.

M. Apr. 1889. Leg. J. D. S.

1828. Heliconiæ Bihai, L. *affinis.*
determ. Baker.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1829. Heliconia lutispatha, Benth.
determ. Baker.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2102. Heliconiæ vaginali, Benth. *affinis.*
determ. Baker.
Masagua, Depart. Escuintla, alt. 400 pp.
M. Apr. 1890. Leg. J. D. S.

1873. Heliconia vitlosa, Klotzsch?
determ. Baker.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1825. Æchmea Donnell-Smithii, Baker.
Journ. Bot. xxviii. 305.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1824. Æchmea Isabellina, Baker.
Journ. Bot. xxviii. 305.
Boca del Polochic, Depart. Yzabal, alt. 200 pp.
M. Apr. 1889. Leg. J. D. S.

1823. Æchmea squarrosa, Baker.
Journ. Bot. xxviii. 305.
Boca del Polochic, Depart Yzabal, alt. 200 pp.
M. Apr. 1889. Leg. J. D. S.

1951. Tillandsia bulbosa, Hook.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Mart. 1890. Leg. J. D. S.

2010. Tillandsia bulbosa, Hook.
determ. Baker.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1959. Tillandsia setacea, Swz.
determ. Baker.
Pacaya, Depart. Amatitlan, alt. 6,000 pp.
M. Mart. 1890. Leg. J. D. S.

1659. Tillandsia sparsiflora, Baker.
Journ. Bot. xxviii. 306.
Serraquitché, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

1660. Tillandsia streptophylla, Scheidw.
determ. Baker.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1958. Tillandsia vestita, Cham. et Schl.
determ. Baker.
Pacaya, Depart. Amatitlan, alt. 6,000 pp.
M. Mart. 1890. Leg. J. D. S.

2160. Sisyrinchium alatum, Hook.
Volcan de Agua, Depart. Zacatepequez, alt. 10,000 pp.
M. Apr. 1890. Leg. J. D. S.

145. Sisyrinchium micranthum, Cav.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Febr. 1886. Leg. H. von Türckheim.

1777. Sisyrinchium scabrum, Cham. et Schl.
determ. Baker.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1686. Sisyrinchium tinctorium, H. B. K.
Barranca del Rubelcruz, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

33A. Hypoxis decumbens, L.
Coban, Depart. Alta Verapaz, alt. 4,400 pp.
M. Maj. 1879. Leg. H. von Türckheim.

1671. Zephyranthes carinata, Herb.?
determ. Baker.
Santa Cruz, Depart. Alta Verapaz, alt. 4,600 pp.
M. Apr. 1889. Leg. J. D. S.

1832. Crinum erubescens, Ait.
determ. Baker.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1947. Crinum erubescens, Ait.
determ. Baker.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Mart. 1890. Leg. J. D. S.

1831. Hymenocallis littoralis, Salisb.
determ. Baker.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2053. Hymenocallis littoralis, Salisb.
determ. Baker.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2167. Bomarea hirtella, Herb.
Volcan de Agua, Depart. Zacatepequez, alt. 9,000 pp.
M. Apr. 1890. Leg. J. D. S.

2085. Agave rigida, J. Miller.
determ. Baker.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2175. Smilacina flexuosa, Hook.
Volcan de Agua, Depart. Zacatepequez, alt. 10,000 pp.
M. Apr. 1890. Leg. J. D. S.

1652. Pontederia cordata, L,
forma sagittata, Solms.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1964. Heteranthera reniformis, Ruiz et Pav.
Sapote, Depart. Guatemala, alt. 4,300 pp.
M. Mart. 1890. Leg. J. D. S.

2218. Tinantia fugax, Scheidw.
determ. C. B. Clarke.
Antigua, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1653. Tradescantia commelinoides, Rœm. et Sch.
determ. C. B. Clarke.
Senahú, Depart. Alta Verapaz, alt. 3,500 pp.
M. Apr. 1889. Leg. J. D. S.

2224. Tradescantia commelinoides, Rœm. et Sch.
determ. C. B. Clarke.
Guatemala, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

2220. Tradescantia Cumanensis, Kunth,
var. glabrior, C. B. Clarke.
determ. C. B. Clarke.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1643. Tradescantia elongata, G. F. W. Meyer.
determ. C. B. Clarke.
Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2222. Tradescantia elongata, G. F. W. Meyer,
var. diuretica, C. B. Clarke.
determ. C. B. Clarke.
Aceituna, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

2221. Callisia Martensiana, C. B. Clarke.
determ. C. B. Clarke.
Pinula, Depart. Guatemala, alt. 4,300 pp.
M. Febr. 1890. Leg. J. D. S.

2223. Callisia Martensiana, C. B. Clarke.
determ. C. B. Clarke.
Guatemala, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

2043. Campelia Zanonia, H. B. K.
Torolá, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2219. Zebrina pendula, Schnitzl.
determ. C. B. Clarke.
Masagua, Depart. Escuintla, alt. 400 pp.
M. Apr. 1890. Leg. J. D. S.

2145. Weldenia candida, Schult.
(*Lampra volcanica, Benth.*)
determ. Baker.
Volcan de Agua, Depart. Zacatepequez, alt. 12,000 pp.
M. Apr. 1890. Leg. J. D. S.

1295. Juncus tenuis, Willd.
Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.
M. Jul. 1887. Leg. H. von Türckheim.

2047. Chamædorea Pacaya, Œrst.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2134. Chamædorea Pacaya, Œrst.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1833. Geonoma Olfersiana, Klotzsch?
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1835. Bactris balanoidea, Wendl.
Boca del Cajabon, Depart. Yzabal, alt. 300 pp.
M. Apr. 1889. Leg. J. D. S.

2060. Bactris balanoidea, Wendl.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1834. Attalea Cohune, Mart.
Monte Cachirulo, Depart. Yzabal, alt. 900 pp.
M. Apr. 1889. Leg. J. D. S.

1928. Typha Domingensis, Pers.
determ. Morong.
Rio Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

1696. Typha latifolia, L.
determ. Morong.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

2110. Pistia Stratiodes, L.,
var. obcordata, Engl.
Petapa, Depart. Amatitlan, alt. 4,000 pp.
M. Apr. 1890. Leg. J. D. S.

2122. Pistia Stratiodes, L.,
var. obcordata, Engl.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1536. Xanthosoma roseum, Schott.
determ. Engler.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

1535. Philodendron Donnell-Smithii,
Engl. n. sp. ined.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2240. Philodendron Guatemalense,
Engl. n. sp. ined.
Torolá, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2235. Syngonium Donnell-Smithii,
Engl. n. sp. ined.
Cuyuta, Depart. Escuintla, alt. 200 pp.
M. Apr. 1890. Leg. J. D. S.

2238. Syngonium Donnell-Smithii,
Engl. n. sp. ined.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2243. Syngonium Donnell-Smithii,
Engl. n. sp. ined.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1530. Syngonium podophyllum, Schott.
determ. Engler.
La Tinta, Depart. Alta Verapaz, alt. 600 pp.
M. Apr. 1889. Leg. J. D. S.

1532. Syngonium podophyllum, Schott.
determ. Engler.
Boca del Polochic, Depart. Yzabal, alt. 200 pp.
M. Apr. 1889. Leg. J. D. S.

2239. Dieffenbachia Seguine, Schott.
determ. Engler.
Torolá, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

1533. Monstera acuminata, C. Koch.
determ. Engler.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2234. Monstera pertusa, de Vriese.
determ. Engler.
San Juan Mixtan, Depart. Escuintla, alt. 500 pp.
M. Apr. 1890. Leg. J. D. S.

2242. Monstera pertusa, de Vriese.
determ. Engler.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1531. Monstera pertusa, de Vriese,
var. Jacquini, Engl.
determ. Engler.
Teleman, Depart. Alta Verapaz, alt. 500 pp.
M. Apr. 1889. Leg. J. D. S.

1538. Monstera pertusa, de Vriese,
var. Jacquini, Engl.
determ. Engler.
Chamché, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

1539. Monstera pertusa, de Vriese,
var. Jacquini, Engl.
determ. Engler.
Chabanal, Depart. Alta Verapaz, alt. 550 pp.
M. Apr. 1889. Leg. J. D. S.

2241. Spathiphyllum phryniifolium, Schott.
determ. Engler.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1534. Spathiphyllum Wendlandii, Schott.
determ. Engler.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

2236. Anthurium æmulum, Schott.
determ. Engler.
San Juan Mixtan, Depart. Escuintla, alt. 500 pp.
M. Apr. 1890. Leg. J. D. S.

2201. Lemna paucicostata, Hegelm.
Dueñas, Depart. Zacatepequez, alt. 5,000 pp.
M. Apr. 1890. Leg. J. D. S.

1963. Lemna polyrhiza, L.
Sapote, Depart. Guatemala, alt. 4,300 pp.
M. Mart. 1890. Leg. J. D. S.

1384. Triuris brevistylis.
Botan. Gaz. xvi. 14.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Sept. 1888. Leg. H. von Türckheim.

2229. Cypero cano, Presl. *affinis.*
determ. Britton.
Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.
M. Febr. 1890. Leg. J. D. S.

2227. Cyperus elegans, L.
determ. Britton.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2228. Cyperus ferax, Rich.
determ. Britton.
San Luis, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2231. Cyperus ferax, Rich.
determ. Britton.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

510. Cyperus melanostachyus, H. B. K., forma.

determ. Britton.

Tactic, Depart. Baja Verapaz, alt. 5,000 pp.

M. Jun. 1880. Leg. H. von Türckheim.

1850. Cyperus oxycarioides, Britton.

determ. Britton.

Boca del Polochic, Depart. Yzabal, alt. 200 pp.

M. Apr. 1889. Leg. J. D. S.

1851. Cyperus radiatus, Vahl,

var. elongatus, Bœckl.

determ. Britton.

Boca del Polochic, Depart. Yzabal, alt. 200 pp.

M. Apr. 1889. Leg. J. D. S.

2230. Cypero strigoso, L. *affinis*.

determ. Britton.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

6. Kyllinga cæspitosa, Nees,

var. elatior, Bœckl.

Oliva, Depart. Alta Verapaz, alt. 4,400 pp.

M. Dec. 1877. Leg. H. von Türckheim.

1843. Kyllinga vaginata, Lam.

determ. Britton.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

430. Heleocharis Tuerckheimii, Bœckl.

determ. Britton.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.

M. Apr. 1879. Leg. H. von Türckheim.

469. Fimbristylis acicularis, R. Br.

determ. Britton.

Santa Ana, Depart. Baja Verapaz, alt. 2,500 pp.

M. Nov. 1879. Leg. H. von Türckheim.

2194. Scirpus viviparus, Presl.

determ. Britton.

Laguna Amatitlan, Depart. Amatitlan, alt. 3,900 pp.

M. Febr. 1890. Leg. J. D. S.

1847. Hypolytrum Nicaraguense, Liebm.

determ. Britton.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

1848. Rhynchospora aurea, Vahl.

determ. Britton.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

1844. Scleria melaleuca, Rich.

determ. Britton.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

1845. Scleria microcarpa, Nees.

determ. Britton.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

2226. Scleria pratensis, Lindl.

determ. Britton.

San Juan Mixtan, Depart. Escuintla, alt. 500 pp.

M. Apr. 1890. Leg. J. D. S.

2225. Carex Jamesoni, Boott, var. gracilis, Bailey.

determ. Bailey.

Volcan de Agua, Depart. Zacatepequez, alt. 10,000 pp.

M. Apr. 1890. Leg. J. D. S.

440. Paspalum Cordovense, Fourn.?

determ. Vasey.

Coban, Depart. Alta Verapaz, alt. 4,400 pp.

M. Maj. 1879. Leg. H. von Türckheim.

459. Paspalum virgatum, L.

determ. Vasey.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.

M. Jul. 1879. Leg. H. von Türckheim.

87. Isachne arundinacea, Griseb.

determ. Vasey.

Coban, Depart. Alta Verapaz, alt. 4,400 pp.

M. Apr. 1879. Leg. H. von Türckheim.

1854. Isachne disperma, Dœll.

determ. Vasey.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.

M. Apr. 1889. Leg. J. D. S.

2233. Panicum fasciculatum, Swz.

determ. Vasey.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

1852. Panicum lanatum, Swz.

determ. Vasey.

Rio Dulce, Depart. Livingston, alt. 0 pp.

M. Mart. 1889. Leg. J. D. S.

2232. Panicum leucophæum, H. B. K.

determ. Vasey.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Apr. 1890. Leg. J. D. S.

1416. Ichnanthes navicularis, Vasey.

determ. Vasey.

Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.

M. Oct. 1888. Leg. H. von Türckheim.

473. Oplismenus Humboldtianus, Nees.

Santa Ana, Depart. Baja Verapaz, alt. 2,500 pp.

M. Nov. 1879. Leg. H. von Türckheim.

445. Pennisetum crinitum, Scribn.

determ. Vasey.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.

M. Maj. 1879. Leg. H. von Türckheim.

1853. Pennisetum tristachyum, Vasey,

forma (*Gymnothrix bambusæformis, Fourn.*)

determ. Vasey.

Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.

M. Apr. 1889. Leg. J. D. S.

42. Saccharum Cayennense, Benth.

Coban, Depart. Alta Verapaz, alt. 4,400 pp.

M. Aug. 1879. Leg. H. von Türckheim.

472. Andropogon fastigiatus, Swz.

determ. Vasey.

Santa Ana, Depart. Baja Verapaz, alt. 2,500 pp.

M. Nov. 1879. Leg. H. von Türckheim.

471. Andropogon malacostachys, Presl.

determ. Vasey.

Santa Ana, Depart. Baja Verapaz, alt. 2,500 pp.

M. Nov. 1879. Leg. H. von Türckheim.

468. Aristida dispersa, Trin.

determ. Vasey.

Santa Ana, Depart. Baja Verapaz, alt. 2,500 pp.

M. Nov. 1879. Leg. H. von Türckheim.

1566. Gleichenia pubescens, H. B. K.

Yzabal, Depart. Yzabal, alt. 400 pp.

M. Apr. 1889. Leg. J. D. S.

1567. Hemitelia multiflora, R. Br.

Monte Cachirulo, Depart. Yzabal, alt. 900 pp.

M. Apr. 1889. Leg. J. D. S.

257. Alsophila armata, Presl.

Coban, Depart. Alta Verapaz, alt. 4,300 pp.

M. Dec. 1880. Leg. H. von Türckheim.

1542. Dicksonia cicutaria, Swz.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1553. Dicksonia cicutaria, Swz.,
var. cicutarioides. (*D. cicutarioides, Fee.*)
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

2426. Dicksonia rubiginosa, Kaulf.
Guatemala, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

1505. Dicksonia Schiedei, Baker.
Santa Cruz, Depart. Alta Verapaz, alt. 4,600 pp.
M. Apr. 1889. Leg. J. D. S.

2423. Dicksonia Schiedei, Baker.
Guatemala, Depart. Guatemala, alt. 4,500 pp.
M. Febr. 1890. Leg. J. D. S.

481. Hymenophyllum asplenioides, Swz.
Tactic, Depart. Alta Verapaz, alt. 5,000 pp.
M. Dec. 1879. Leg. H. von Türckheim.

12. Hymenophyllum ciliatum, Swz.
Chicoyonito, Depart. Alta Verapaz, alt. 4,400 pp.
M. Dec. 1877. Leg. H. von Türckheim.

1548. Hymenophyllum ciliatum, Swz.
Chicoyonito, Depart. Alta Verapaz, alt. 4,400 pp.
M. Apr. 1889. Leg. J. D. S.

12A. Hymenophyllum interruptum, Kze.
Chicoyonito, Depart. Alta Verapaz, alt. 4,400 pp.
M. Dec. 1877. Leg. H. von Türckheim.

12B. Hymenophyllum lineare, Swz.
Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.
M. Dec. 1877. Leg. H. von Türckheim.

1549. Hymenophyllum lineare, Swz.
Chicoyonito, Depart. Alta Verapaz, alt. 4,400 pp.
M. Apr. 1889. Leg. J. D. S.

1569. Hymenophyllum myriocarpum, Hook.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

5. Hymenophyllum polyanthos, Swz.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Dec. 1877. Leg. H. von Türckheim.

5A. Hymenophyllum polyanthos, Swz, var. (*H. clavatum, Swz.*)
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Dec. 1877. Leg. H. von Türckheim.

1571. Trichomanes Kaulfussii, Hook. et Grev.
Rio Dulce, Depart. Livingston, alt. 0 pp.
M. Mart. 1889. Leg. J. D. S.

525. Trichomanes pinnatum, Hedw.
Cubelquitz, Depart. Alta Verapaz, alt. 1,000 pp.
M. Aug. 1880. Leg. H. von Türckheim.

2424. Cystopteris fragilis, Bernh.
Guatemala, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

2435. Adiantum Capillus-Veneris, L.
San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

2434. Adiantum glaucophyllum, Hook.
Volcan de Agua, Depart. Zacatepequez, alt. 10,000 pp.
M. Apr. 1890. Leg. J. D. S.

1560. Adiantum intermedium, Swz.
Rio Dulce, Depart. Livingston, alt. 100 pp.
M. Mart. 1889. Leg. J. D. S.

493A. Adiantum macrophyllum, Swz.
Chiacam, Depart. Alta Verapaz, alt. 2,500 pp.
M. Jan. 1880. Leg. H. von Türckheim.

2430. Adiantum pulverulentum, L.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2429. Adiantum tenerum, Swz.
Guatemala, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

2431. Adiantum tenerum, Swz.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2432. Adiantum tenerum, Swz.

San Luis, Depart. Escuintla, alt. 1,000 pp.

M. Mart. 1890. Leg. J. D. S.

494. Adiantum villosum, L.

Chiacam, Depart. Alta Verapaz, alt. 2,500 pp.

M. Febr. 1880. Leg. H. von Türckheim.

2433. Adiantum villosum, L.

Escuintla, Depart. Escuintla, alt. 1,100 pp.

M. Mart. 1890. Leg. J. D. S.

1558. Hypolepis nigrescens, Hook.

Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.

M. Apr. 1889. Leg. J. D. S.

1426. Cheilanthes farinosa, Kaulf.

Santa Rosa, Depart. Baja Verapaz, alt. 5,000 pp.

M. Sept. 1888. Leg. H. von Türckheim.

2417. Cheilanthes speciosissima, A. Br.

Volcan de Agua, Depart. Zacatepequez, alt. 11,500 pp.

M. Apr. 1890. Leg. J. D. S.

2428. Pellæa intramarginalis, J. Smith.

Guatemala, Depart. Guatemala, alt. 5,000 pp.

M. Febr. 1890. Leg. J. D. S.

1565. Pteris aquilina, L., var. arachnoidea, Baker.

Yzabal, Depart. Yzabal, alt. 600 pp.

M. Apr. 1889. Leg. J. D. S.

2436. Pteris biaurita, L.

Torolá, Depart. Escuintla, alt. 1,000 pp.

M. Mart. 1890. Leg. J. D. S.

503. Pteris Cretica, L.

Tactic, Depart. Alta Verapaz, alt. 4,800 pp.

M. Jun. 1880. Leg. H. von Türckheim.

1544. Pteris Cretica, L.

Santa Cruz, Depart. Alta Verapaz, alt. 4,500 pp.

M. Apr. 1889. Leg. J. D. S.

1503. Pteris incisa, Thunb.

Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.

M. Apr. 1889. Leg. J. D. S.

2425. Pteris laciniata, Willd.
Guatemala, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

1564. Pteris pulchra, Schlecht.
Senahú, Depart. Alta Verapaz, alt. 3,500 pp.
M. Apr. 1889. Leg. J. D. S.

2437. Pteris pulchra, Schlecht.
Cuyuta, Depart. Escuintla, alt. 200 pp.
M. Apr. 1890. Leg. J. D. S.

2427. Lomaria procera, Spreng.,
forma (*L. spectabilis, Liebm.*)
Guatemala, Depart. Guatemala, alt. 4,500 pp.
M. Febr. 1890. Leg. J. D. S.

2422. Blechnum occidentale, L.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2449. Asplenium castaneum, Schlecht.
Volcan de Agua, Depart. Zacatepequez, alt. 12,300 pp.
M. Apr. 1890. Leg. J. D. S.

1556. Asplenium Fendleri, Hook.,
var. paucipinnatum.
Botan. Gaz. xii. 134.
Barranca del Rubelcruz, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

2444. Asplenium formosum, Willd.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1561. Asplenium Franconis, Mett.,
var. gracile, Fourn.
Santa Cruz, Depart. Alta Verapaz, alt. 4,600 pp.
M. Apr. 1889. Leg. J. D. S.

2448. Asplenium monanthemum, L.
San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

2446. Asplenium polyphyllum, Bertol.
Volcan de Agua, Depart. Zacatepequez, alt. 12,300 pp.
M. Apr. 1890. Leg. J. D. S.

2447. Asplenium polyphyllum, Bertol.
Volcan de Agua, Depart. Zacatepequez, alt. 10,000 pp.
M. Apr. 1890. Leg. J. D. S.

1554. Asplenium plantagineum, L.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1555. Asplenium rhizophyllum, Kze.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

2445. Asplenium Skinneri, Baker.
Aceituna, Depart. Guatemala, alt. 4,600 pp.
M. Febr. 1890. Leg. J. D. S.

1545. Aspidium aculeatum, Swz.
Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

2451. Aspidium aculeatum, Swz.
Guarda Viejo, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

1562. Aspidium melanostictum, Kze.
Senahú, Depart. Alta Verapaz, alt. 3,500 pp.
M. Apr. 1889. Leg. J. D. S.

2459. Nephrodium amplum, Baker.
Concepcion, Depart. Escuintla, alt. 1,200 pp.
M. Mart. 1890. Leg. J. D. S.

1408. Nephrodium ascendens.
(*Aspidium ascendens, Hew. N. duale, Botan. Gaz. xv. 29. t. iv; xvi. 14.*)
Pansamalá, Depart. Alta Verapaz, alt. 4,000 pp.
M. Jan. 1889. Leg. H. von Türckheim.

2455. Nephrodium catocarpum, Hook.
Torolá, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2450. Nephrodium cicutarium, Baker.
Guatemala, Depart. Guatemala, alt. 5,000 pp.
M. Febr. 1890. Leg. J. D. S.

2454. Nephrodium cicutarium, Baker.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2453. Nephrodium conterminum, Desv.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2433. Nephrodium conterminum, Desv.
Guatemala, Depart. Guatemala, alt. 4,800 pp.
M. Febr. 1890. Leg. J. D. S.

183. Nephrodium denticulatum, Hook.
Tactic, Depart. Alta Verapaz, alt. 5,000 pp.
M. Dec. 1879. Leg. H. von Türckheim.

2456. Nephrodium macrophyllum, Baker.
Torolá, Depart. Escuintla, alt. 1,000 pp.
M. Mart. 1890. Leg. J. D. S.

2458. Nephrodium molle, Desv.
Concepcion, Depart. Escuintla, alt. 1,200 pp.
M. Mart. 1890. Leg. J. D. S.

1563. Nephrodium Salvini, Baker.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

2457. Nephrodium Sprengelii, Hook.
Cuyuta, Depart. Escuintla, alt. 200 pp.
M. Apr. 1890. Leg. J. D. S.

2461. Nephrodium Sprengelii, Hook.?
San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

2462. Nephrodium Sprengelii, Hook.?
Pinula, Depart. Guatemala, alt. 4,300 pp.
M. Feb. 1890. Leg. J. D. S.

1568. Nephrodium Tuerckheimii.
Botan. Gaz. xii. 133, t. xi.
Tamajú, Depart. Alta Verapaz, alt. 4,000 pp.
M. Apr. 1889. Leg. J. D. S.

490. Polypodium angustifolium, Swz.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Febr. 1880. Leg. H. von Türckheim.

2443. Polypodium angustifolium, Swz.
Volcan de Agua, Depart. Zacatepequez, alt. 10,500 pp.
M. Apr. 1890. Leg. J. D. S

1557. Polypodium angustum, Mett.
Barranca del Rubelcruz, Depart. Alta Verapaz, alt. 2,500 pp.
M. Apr. 1889. Leg. J. D. S.

1573. Polypodium cheilostictum, Fée.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1415. Polypodium cultratum, Willd.,
var. reclinatum, Baker.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Nov. 1888. Leg. H. von Türckheim.

550. Polypodium Ghiesbreghtii, Linden.
Chamiquin, Depart. Alta Verapaz, alt. 1,200 pp.
M. Febr. 1881. Leg. H. von Türckheim.

1407. Polypodium Ghiesbreghtii, Linden.
Sacolal, Depart. Alta Verapaz, alt. 3,000 pp.
M. Jan. 1889. Leg. H. von Türckheim.

478. Polypodium lanceolatum, L.
Tactic, Depart. Alta Verapaz, alt. 5,000 pp.
M. Dec. 1879. Leg. H. von Türckheim.

1541. Polypodium loriceum, L.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

2442. Polypodium moniliforme, Lagasca.
Volcan de Agua, Depart. Zacatepequez, alt. 12,300 pp.
M. Apr. 1890. Leg. J. D. S.

1559. Polypodium obliteratum, Swz.
Rio Dulce, Depart. Livingston, alt. 100 pp.
M. Mart. 1889. Leg. J. D. S.

1413. Polypodium piloselloides, L.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Nov. 1888. Leg. H. von Türckheim.

1572. Polypodium plebeium, Schlecht.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

2441. Polypodium plesiosorum, Kze.
Volcan de Agua, Depart. Zacatepequez, alt. 9,000 pp.
M. Apr. 1890. Leg. J. D. S.

2452. Polypodium rigidum, Hook. et Grev.
San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

1551. Polypodium rude, Kze.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

2460. Polypodium rude, Kze.
San Rafael, Depart. Zacatepequez, alt. 6,500 pp.
M. Apr. 1890. Leg. J. D. S.

2438. Polypodium suspensum, L.
Guatemala, Depart. Guatemala, alt. 4,800 pp.
M. Febr. 1890. Leg. J. D. S.

2439. Polypodium tetragonum, Swz.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2440. Polypodium tetragonum, Swz.
Cuyuta, Depart. Escuintla, alt. 200 pp.
M. Apr. 1890. Leg. J. D. S.

516. Gymnogramme pumila, Anton Sprengel.
Cubelquitz, Depart. Alta Verapaz, alt. 1,000 pp.
M. Aug. 1880. Leg. H. von Türckheim.

177. Gymnogramme tartarea, Desv.
Tactic, Depart. Alta Verapaz, alt. 5,000 pp.
M. Dec. 1879. Leg. H. von Türckheim.

2421. Meniscium serratum, Cav.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1547. Vittaria lineata, Swz.
Yzabal, Depart. Yzabal, alt. 200 pp.
M. Apr. 1889. Leg. J. D. S.

197. Vittaria lineata, Swz.,
forma (*V. filifolia, Fee.*)
Tactic, Depart. Alta Verapaz, alt. 5,000 pp.
M. Dec. 1879. Leg. H. von Türckheim.

2420. Acrostichum alienum, Swz.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

2418. Acrostichum Matthewsii, Fée.
Volcan de Agua, Depart. Zacatepequez, alt. 12,300 pp.
M. Apr. 1890. Leg. J. D. S.

1441. Aneimia adiantifolia, Swz.
Barranca del Rubelcruz, Depart. Alta Verapaz, alt. 3,000 pp.
M. Jan. 1889. Leg. H. von Türckheim.

1546. Lygodium venustum, Swz.
Monte Cachirulo, Depart. Yzabal, alt. 900 pp.
M. Apr. 1889. Leg. J. D. S.

2419. Lygodium venustum, Swz.
Escuintla, Depart. Escuintla, alt. 1,100 pp.
M. Mart. 1890. Leg. J. D. S.

1543. Marattia alata, Smith.
Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

520. Danæa elliptica, Smith.
Cubelquitz, Depart. Alta Verapaz, alt. 1,000 pp.
M. Aug. 1880. Leg. H. von Türckheim.

1550. Botrychium Virginianum, Swz.
Chucaneb, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

308. Equisetum giganteum, L.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Febr. 1880. Leg. H. von Türckheim.

1629. Equisetum giganteum, L.
Coban, Depart. Alta Verapaz, alt. 4,300 pp.
M. Apr. 1889. Leg. J. D. S.

1580. Lycopodium clavatum, L., var. (*L. trichiatum, Bory.*)
Chamché, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

1581. Lycopodium reflexum, Lam.
Chamché, Depart. Alta Verapaz, alt. 6,000 pp.
M. Apr. 1889. Leg. J. D. S.

1578. Selaginella binervis, Liebm.
determ. Baker.
Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.
M. Apr. 1889. Leg. J. D. S.

1574. Selaginella erythropus, Spring.

determ. Baker.

Monte Cachirulo, Depart. Yzabal, alt. 900 pp.

M. Apr. 1889. Leg. J. D. S.

1577. Selaginella flabellata, Spring.

determ. Baker.

Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.

M. Apr. 1889. Leg. J. D. S.

4A. Selaginella Galeottii, Spring.

Sanchamac, Depart. Alta Verapaz, alt. 4,400 pp.

M. Nov. 1877. Leg. H. von Türckheim.

1575. Selaginella Galeottii, Spring.

Chicoyonito, Depart. Alta Verapaz, alt. 4,300 pp.

M. Apr. 1889. Leg. J. D. S.

1579. Selaginella Galeottii, Spring.

determ. Baker.

Tamajú, Depart. Alta Verapaz, alt. 4,000 pp.

M. Apr. 1889. Leg. J. D. S.

79. Selaginella Guatemalensis, Baker.

Coban, Depart. Alta Verapaz, alt. 4,600 pp.

M. Apr. 1879. Leg. H. von Türckheim.

1576. Selaginella Martensii, Spring.

determ. Baker.

Pansamalá, Depart. Alta Verapaz, alt. 3,800 pp.

M. Apr. 1889. Leg. J. D. S.

1502. Salvinia auriculata, Aubl.

Panzos, Depart. Alta Verapaz, alt. 440 pp.

M. Apr. 1889. Leg. J. D. S.

1957. Salvinia auriculata, Aubl.

Petapa, Depart. Amatitlan, alt. 4,000 pp.

M. Apr. 1890. Leg. J. D. S.

2237. Salvinia auriculata, Aubl.

Dueñas, Depart. Zacatepequez, alt. 5,000 pp.

M. Apr. 1890. Leg. J. D. S.

1508. Azolla Caroliniana, Willd.

Panzos, Depart. Alta Verapaz, alt. 440 pp.

M. Apr. 1889. Leg. J. D. S.

APPENDIX.

NOMINA INSERENDA.

341. Abutilon Mexicanum, Presl.

1359. Triumfetta Orizabæ, Turcz.

119. Desmodium infractum, DC.

540. Heeria axillaris, Cogn.
determ. Cogniaux.

9. Tibouchina longifolia, Baill.
determ. Cogniaux.

306. Monochætum rivulare, Naud.
determ. Cogniaux.

1233. Conostegia hirtella, Cogn.
Botan. Gaz. xvi. 4.

1232. Conostegia montana, D. Don.
determ. Cogniaux.

255. Miconia dodecandra, Cogn.
(*M. Fothergilla, Naud. part.*)
determ. Cogniaux.

924. Miconia Guatemalensis, Cogn.
Botan. Gaz. xvi. 5.

1317. Miconia Guatemalensis, Cogn.
Botan. Gaz. xvi. 5.

905. Miconia Mexicana, Naud.,
var. conostegioides, Cogn.
determ. Cogniaux.

581. Miconia Tuerckheimii, Cogn.
Botan. Gaz. xvi. 5.

707. Clidemia laxiflora, Walp. et Naud.,
var. longipetiolata, Cogn.
Botan. Gaz. xvi. 5.

582. Rondeletia villosa, Hemsl.

1252. Posoqueria coriacea, Mart. et Gal.

922. Psychotria platyphylla, DC.

52. Eupatorium ageratifolium, DC.
determ. Coulter.

1177. Eupatorium pycnocephalum, Less.
determ. Coulter.

1342. Eupatorium Türckheimii, Klatt.
determ. Coulter.

73. Lobelia laxiflora, H. B. K.,
var. (*L. rigidula, H. B. K.*)

27. Lobelia splendens, Willd.

1152. Symplocos speciosus, Hemsl.

981. Stemmadenia bignoniæflora, Miers.

1251. Nephradenia fruticosa. n. sp. ined.

855. Cuscuta corymbosa, Ruiz et Pav.,
var. grandiflora, Engelm.

1025. Saracha Jaltomata, Schlecht.
determ. Coulter.

833. Cestrum nocturnum, L.

378. Utricularia obtusa, Swz.
determ. Morong.

377. Utricularia subulata, L.
determ. Morong.

196. Besleria Pansamalana. n. sp. ined.

382. Lippia umbellata, Cav.

904. Verbena littoralis, H. B. K.

1192. Salvia amethystina, Smith.

351. Alnus acuminata, H. B. K,
var. ferruginea, Regel.

333. Salix lævigata, Bebb.
determ. Bebb.

975. Piper Donnell-Smithii, C. DC. n. sp. ined.

976. Piper hirsutum, Swz.
determ. C. de Candolle.

940. Piper obliquum, Ruiz et Pav.
determ. C. de Candolle.

1174. Piper Santa-rosanum, C. DC. n. sp. ined.

1122. Piper striatum, C. DC.
determ. C. de Candolle.

1038. Piper Tuerckheimii, C. DC. n. sp. ined.

433. Peperomia Tuerckheimii,
C. DC. n. sp. ined.

1297. Sisyrinchium alatum, Hook.

455. Hymenocallis littoralis, Salisb.
determ. Baker.

547. Pontederia cordata, L.,
forma sagittata, Solms.

201. Xyris communis, Kth.

1213. Tradescantia subscaposa, C. B. Clarke.
Botan. Gaz. xv. 29.

1103. Rhodospatha oblongata, Poepp.
determ. Engler.

900. Heleocharis chætaria, Rœm. et Sch.
determ. C. B. Clarke.

1053. Dicksonia cicutaria, Swz.,
var. cicutarioides. (*D. cicutarioides, Fee.*)

850. Asplenium Riedelianum, Bong.
(*A. Vera-pax, Botan. Gaz. xiii. 77. t. ii; xv. 29.*)

1054. Nephrodium catocarpum, Hook. haud dubie.

626. Nephrodium Salvini, Baker.

673. Polypodium angustum, Mett.

4. Selaginella Galeottii, Spring.

972. Selaginella Galeottii, Spring.

[From the BOTANICAL GAZETTE, Vol. xv, No. 1.]

A new genus of Umbelliferæ.

JOHN M. COULTER AND J. N. ROSE.

(WITH PLATE II.)

From the interesting collections made in Guatemala under the direction of Mr. John Donnell Smith an Umbellifer was sent to us for determination, which proves to be the type of a new genus. We take pleasure in dedicating it to Mr. Smith, whose name should be prominently connected with the Guatemalan flora.

DONNELLSMITHIA. — Calyx-teeth obsolete. Fruit roundish-ovate, glabrous, strongly flattened laterally. Carpel flattened laterally, with equal filiform ribs, the intermediates distant from the laterals, and a thin pericarp with no strengthening cells (or the merest trace). Stylopodium wanting. Oil-tubes numerous, rather large, almost contiguous about the carpel, those of the commissural face more crowded and often larger. Seed invested by an oil-secreting layer which may develop small tubes, especially in the commissural region, the face with a deep and narrow sulcus. —Slender glabrous perennial, from rather slender elongated roots, with ternately compound leaves, narrow mostly entire leaflets, with involucre mostly present and no involucels, and yellow flowers in widely spreading loose umbels which are long-peduncled or sessile.

D. Guatemalensis. Glaucous: stem erect, simple or branched, 8 to 30 in. high: leaves mostly near the base, long-petioled, twice or thrice ternate, with lanceolate to oblong leaflets (1½ to 2 in. long, 3 to 6 lines broad), mostly entire and with revolute callous margin: umbels on long divergent slender peduncles or the latter often sessile, 5 or 6-rayed, with involucre mostly present and of 3 or 4 trifid bracts; rays 1 to 2 in. long; pedicels 2 to 3 lines long: fruit round-ovate, 1 to 1½ lines long.

Santa Rosa, Dept. Baja Verapaz, Guatemala, 5,000 feet altitude, July, 1887 (no. 1311 ex. Pl. Guat. Tuerckh., qu. edid. John Donnell Smith).

The new genus is probably most nearly related to Eulophus, from which it differs not only in its root and leaf characters, but chiefly in its fruit and carpels being strongly laterally flattened, its seed-face having a deep and narrow sul

cus, and in the entire absence of a stylopodium. In Eulophus the carpels are decidedly dorsally flattened, the seed-face has a broad and shallow concavity, and there is a conical stylopodium. Donnellsmithia differs from Museniopsis in its tall and slender caulescent habit, foliage characters, the absence of a stylopodium, and its more flattened carpels. In fact, the low depressed acaulescent habit of Museniopsis, and its foliage are strikingly different from the new genus.

Explanation of Plate II.—Fig. 1, the whole plant; fig. 2, a single umbellet; fig. 3, a single fruit; fig. 4, cross-section of the fruit, in which, however, the pericarp is too thick.

Crawfordsville, Indiana.

Undescribed plants from Guatemala. VII.

JOHN DONNELL SMITH.

(WITH PLATES III and IV.)

Oxalis dimidiata (§ *Euoxys* Progel in Fl. Brasil.)—Smooth except insertion of petioles and of leaflets: rhizome tuberose, woody, dentate with thick ovate reddish scales: leaflets ternate, subcoriaceous, purple and linear-punctate beneath, lobes widely diverging and oblong-rhomboidal, the exterior one of lateral leaflets reduced to a cuneate wing: scape little exceeding leaves, 4-6 inches long, umbellately 4-flowered: sepals lanceolate, apex biglandular: corolla more than twice longer (5-6 lines), purple; longer filaments ciliolate, edentulate: styles barbate: capsule lanceolate-oblong, a little exceeding calyx, cells 3-4-seeded.—Low grounds near Coban, Depart. Alta Verapaz, alt. 4,300 feet, April 1889, J. D. S. (Ex Pl. Guat., qu. edid. J. D. S., 1682.)

Hanburia parviflora. BOTAN. GAZETTE, xiii, 299.—Leaves undivided and oblong-lanceolate, or 2-3-partite, margin entire or coarsely dentate: monoicous flowers from same or distinct axils, peduncle of the female twice exceeding raceme of the male: fruit obliquely ovate-lanceolate, sparsely echinate and tuberculate.—The characters, completing description, are drawn from my collections in clearings at Pansamalá, April, 1889, the stems, many yards long, forming thickets. (Ex Pl. cit. 1509.)

Styrax Guatemalensis.—Tree 30–40 feet high; pubescence of branchlets, petioles and inflorescence stellular, flavescent sprinkled with red: leaves glabrous, membranaceous, oval or obovate, acuminate, base acute, entire, 3–4 inches long, half as broad: flowers nodding, 5–8 in a terminal short loose raceme, also single or geminate from upper axils, 8 lines long: calyx sub-equaling pedicel and petioles, truncate, teeth nearly obsolete: petals twice exceeding calyx, canescent, one-third-adnate, imbricating, oblong, obtuse: shortly monadelphous stamens inserted below throat: ovary one-third-immersed, ovules about 24.—Sasis, Depart. Alta Verapaz, alt. 5,000 feet, April, 1889, H. Helmrick (Ex Pl. cit. 1690.)—*S. grandifolia* Ait. differs by discolorate leaves, toothed calyx, long raceme; *S. glabrescens* Benth., *ex descript.* also

a related species, by ovate leaves, half-larger flowers, obovate petals, etc.

Solanum olivæforme. BOTAN. GAZETTE, xiv, 28.—Matured fruit strongly compressed, sides unequally convex, margin winged: seeds orbicular, granulate.—Barrancas of Rubelcruz, Depart. Alta Verapaz, alt. 2,500 feet, April, 1889, J. D. S. (Ex Pl. cit. 1785.)

Campanea picturata.—Repent at base, rufo-villose: leaves scabrid above, pubescent beneath, crenate, inæquilateral; the larger of the pair oblong-lanceolate, 5–7 in. long, exceeding peduncle; the other ovate-lanceolate: pedicels 3–4-fasciculate, chiefly simple, 1–3 inches long; bracteoles minute: calyx segments smooth within, lanceolate, 9 lines long: corolla greenish-white and hairy without, pure-white within; tube campanulate, twice exceeding calyx; purple serial markings of bilabiate limb punctiform near margin, larger or oblong elsewhere, erect upper lip half as long as tube and bifid, spreading lower lip shorter and trifid, lobes semi-orbicular and entire: filaments curving; purple-spotted anthers cohering in 8-lobed circle: ovary nearly free, glands connate in a ring. —A pseudo-parasitic shrub, 3-4 feet high, collected by Baron Von Türckheim and myself at an altitude of 6,000 feet in the Alta Verapaz forests, Apr., 1889 (Ex Pl. cit. 1501).—In size and coloring of flowers scarcely inferior to *C. grandiflora* Dcne, and with its corolla, stamens and glands. The indument, foliage, inflorescence and calyx are nearly those of *C. Œrstedii* Klotzsch.

EXPLANATION OF PLATE III.—Fig. 1. upper part of plant. Fig. 2, flower laid open. Fig. 3, anthers. Fig. 4, ovary. Fig. 5, portion of upper surface of leaf. Fig 6, hair of indument. (Figs. 1 and 2 are natural size; the others are variously magnified.)

Carpinus Americanus Michx., var. tropicalis.—Branchlets, petioles, leaf-nervatures, rhachis and nuts pubescent: fertile spikes 2½ inches long, nearly thrice exceeding peduncles, about 20-flowered: bractlets small, oblong, obtuse, mucronate, minutely hastate on one or both sides, otherwise nearly entire.—Chicoyonits, Depart. Alta Verapaz, alt. 4,300 feet, April 1889, J. D. S. (Ex. Pl. cit. 1667). To the variety is referred also *no. 1446 Lehmann Pl. Guatemal. Costaric. Columbianæ*, collected in same department, May, 1882. *Nos. 2606, 2607 Bernouilli & Cario Fl. Guatemal.* are cited by Mr. Hemsley as *C. Americanus*. The genus is otherwise unrecorded from any locality south of Florida.

"**Tradescantia subscaposa,** sp. nova. Glabra: foliis omnibus subradicalibus, subsessilibus latissime oblongis, subito acutatis: paniculâ 10-25 cm. longâ, longe pedunculatâ, oblongâ, compositâ, floribus plurimis condensatis: petalis purpureo-roseis, venosis: staminibus perfectis 6, filamentis glabris; antheris ellipsoideis, longitudinaliter dehiscentibus, in connectivo subquadrato lateraliter sessilibus: ovario apice glanduloso-piloso. — Species T. Warszewiczianæ, Kunth et Bouché (C. B. Clarke in DC. Monograph. iii. 302), proxima. Pseudoscaposa; bracteæ inferiores 1-3 cm. longæ, non cum foliis consimiles. Quam a sepalis herbaceis, tam a petalis coloratis antherisque, Tradescantiæ potius quam Spironemati affinior. Cl. Hasskarl autem T. Warszewiczianam quasi Spironematis speciem notaverat." C.B.Clarke *in litt.* 23 Dec., 1889.—Rock-crevices, Santa Rosa, Depart. Baja Verapaz, alt. 5,000 feet, July, 1887, von Türckheim (Ex Pl. cit. 1213). Distributed by me as *Spironema sp.*

Asplenium Vera-pax. BOTAN. GAZETTE, xiii. 77.—This fern, supposed to have been undescribed, is now referred to *A. Riedelianum* Bong., a species reported only from some of the southern provinces of Brazil.

Nephrodium duale (*Lastrea*). — Rhizome epiphytal, sarmentose, very stout, densely clothed with long scales: stipes scattered, smooth, 10-18 inches long: twice to thrice longer fronds and their divisions deltoid-lanceolate, coriaceous, glabrate, decompound, dimorphous; lower secondary pinnules of sterile frond 2 inches long, cut nearly to rhachis into elliptic decurrent inæquilateral lobed segments 8 lines long; fertile frond and its divisions a third smaller, the distinct contracted oblong segments crenate-lobed with concave upper surface: sori confluent from the first, filling the whole surface of frond throughout; indusia large, imbricating, persistent, sinus shallow. — Pansamalá forest, alt. 4000 feet, Jan., 1889, Türckheim (Ex Pl. cit. 1408).—An anomalous species, and with nearly the indusium of *N. fragrans* Rich.

EXPLANATION OF PLATE IV.—Fig. 1, Fertile pinna, $\frac{2}{3}$ nat. size. Fig. 2, upper surface of a fertile secondary pinnule, nat. size. Fig. 3, lower surface of a pair of the above. Fig. 4, sori magnified. Fig. 5, sterile pinna, $\frac{1}{2}$ nat. size. Fig. 6 pair of sterile secondary pinnules, $\frac{2}{3}$ nat. size. Fig. 7, Rhizome.

Baltimore, Md.

[From the BOTANICAL GAZETTE, Vol. XV, No. 10.]

Notes on North American Umbelliferæ. II.

JOHN M. COULTER AND J. N. ROSE.

(WITH PLATE XV.)

The first paper of this series was published in this journal of November, 1889. The present paper consists chiefly of a report on Mr. J. Donnell Smith's Guatemalan collection.

HYDROCOTYLE LEUCOCEPHALA Cham. & Schl. No. 1776 of Smith from Coban Department, Alta Vera Paz, alt. 4,300 feet, April 1889; also 74 of Türckheim from near the same locality, May 1879. Although Mr. Hemsley says that he has found no publication of this species from Mexico, these specimens seem to accord very well with the description.

HYDROCOTYLE BONARIENSIS Lam., var. **Texana** n. var. Petioles and peduncles 15 to 20 cm. long; leaves orbicular-peltate, not notched at base, 12 to 15-nerved: inflorescence 5 to 10 cm. long, irregularly or 3 to 5-umbellately branched: pedicels 3 mm. long or less: fruit obtuse at base, 2 mm. long by 3 mm. broad.—Texas, 1888. *G. C. Nealley.* Probably collected along the sea-coast, as, otherwise, its occurrence within our borders would be hard to explain. The species is only known from southern Mexico and South America.

HYDROCOTYLE PROLIFERA Kell. This species is mentioned by Hemsley in Suppl. Biol. Cent. Amer., and to it are referred Coulter's, and Parry & Palmer's specimens, which in the body of the work are placed under H. interrupta. Smith collected it in Laguna Amatillan, Dept. Amatillan,

altitude 3,900 feet, March 1890; and here also is to be referred Türckheim 493, May 1879, from a marshy meadow near Coban; and very probably E. Kerbin's 482 in herb. Smith.

Eryngium Carlinæ Delar. Common in Guatemala. Smith 2199, altitude 5,000 feet. *E. Lemmoni* C. & R., of southern Arizona and northern Mexico, is very distinct from this and ought easily to be distinguished from it. E. Lemmoni lacks the central foliaceous bractlets of E. Carlinæ, and has different bracts and leaves which are also glaucous. To it should be referred Pringle 2010, of 1889, distributed as E. Carlinæ.

Eryngium fœtidum L. Esquintla, altitude 1,100 feet, March 1890, J. D. Smith.

Eryngium pectinatum Presl. But two localities are given for this species by Hemsley in Biol. Centr. Amer., viz.: Sierra Madre (*Seeman*) and Tefie (*Lay*), neither of which collections we have seen. Smith's specimens are from San Raphael, Guatemala, altitude 6,500 feet, no. 2197. The species has never been very fully characterized, DeCandolle merely describing the leaves and involucre, the flowers being said to be unknown. The plant is tall and branching: leaves slender and long (35 to 45 cm.); bracts 2.5 to 3.5 cm. long, much longer than the globose head (12 mm. in diameter); bractlets lanceolate, cuspidately cleft, as long as the flowers or a little shorter: sepals broadly ovate, abruptly short-cuspidate, 1 mm. long: fruit 4 to 5 mm. long, the lateral scales forming a thin wing as broad as the body, the dorsal ones compressed: oil-tubes 5 (3 dorsal and 2 ventral). This plant differs from DeCandolle's description in the bracts being only occasionally squamose dentate at base. To this species we would also refer Gregg 637, collected in Mexico in 1848 and 1849, without flower or fruit; also Wheeler 192 from Orizaba, S. Mexico, collected in 1855, both in herb. Gray. We have also examined Bourgeau 1177, referred by Hemsley as "aff. E. pectinato." The leaves are very similar to those of E. pectinatum, having the same peculiar paired spines (but the longer are shorter than the breadth of the leaves). The heads are on shorter peduncles and are cylindrical cone-shaped instead of globose, 2.5 cm. long, longer than the (15) linear-lanceolate entire bracts; bractlets much larger than the flowers. Unless there is a mixture of specimens this form ought to be made distinct.

Arracacia Brandegei Coulter & Rose has been again

collected by Mr. Brandegee in Lower California, at Todos Santos, June 28, 1890.

Arracacia Donnell-Smithii n. sp. Glabrous below, puberulent above, 15 to 18 dm. high: leaves (lower ones not seen) with long sheathing petioles, 2 or 3-ternate then pinnate; pinnate segments with 5 to 11 leaflets which are narrowly lanceolate, acuminate, sharply and finely serrate, 2.5 to 7.5 cm. long, lower surface puberulent to glabrate; petioles with a dense ring of soft hairs at base: peduncles 7.5 to 10 cm. long: rays puberulent, about equal, 3.5 to 5 cm. long: flowers white, with small calyx-teeth: fruit abundant, on pedicels 2 mm. long, ovate, glabrous, 6 mm. long, with small conical stylopodium. (Plate xv.)—Top of Volcan de Agua, Depart. Zacatepequez, Guatemala, April 1890, no. 2196. From the locality, here is to be referred Arracacia sp. no. 12 of Hemsley's list in Biol. Centr. Amer., specimens now in herb. Kew collected by Salvin and Godman. Mr. Smith makes the following note: "No. 2196 is a plant occupying in abundance the zone of Volcan de Agua from 10,000 to 11,000 feet, associated with another endemic and equally conspicuous plant, Lupinus flabellaris."

Ottoa œnanthoides HBK. In a deep crater of Volcan de Agua, Depart. Zacatepequez, April 1890, altitude 12,000 feet, no. 2195. This species extends from S. Mexico to Peru. No specimens of this plant are in the National or Columbia College herbaria, and but a single one from Peru in herb. Gray. A good figure is found in HBK. Nov. Gen. et Sp. V. 423.

Peucedanum ambiguum Nutt. The stems are sometimes 37.5 cm. high, and mostly from small globose tubers covered with minute rootlets; in other cases the root elongated and moniliform; in the largest plants simply a long slender root The radical and lower leaves are simply ternate, with the leaflets 2.5 to 7.5 cm. long.

Peucedanum leiocarpum Nutt. proves to be a very poisonous plant.

Crawfordsville, Ind., and
Washington, D. C.

BOTANICAL GAZETTE

VOL. XVI.— CRAWFORDSVILLE, IND., JANUARY, 1891. —NO. 1.

Undescribed plants from Guatemala. VIII.

JOHN DONNELL SMITH.

(WITH PLATES I AND II.)

Prof. Alfred Cogniaux, Dr. M. T. Masters and Dr. W. O. Focke, distinguished monographers of orders, have contributed to this paper descriptions of new species detected by them among the plants submitted to them respectively for determination.

Bocconia vulcanica.— Branchlets, foliage and panicle smooth and shining; leaves glaucous beneath, obovate-elliptical ($5–6 \times 2\frac{1}{2}$ in.), acute apex long-mucronate, tapering below to broadly sessile base, margin evenly glandulo-mucronate with rounded indentations: bracts foliaceous, bractlets scarious: sepals oval ($6 \times 3\frac{1}{2}$ lines), exceeding pedicels, recurved-cuspidate: 10–15 stamens a third shorter, filaments half as long as linear anthers: stout style prolonged from ovary, a half shorter than stigmas: capsule (immature) elliptic-oblong, twice exceeding stipe.— *B. integrifolia* Humb. et Bonpl., likewise arborescent and with lobeless leaves crowded about base of large drooping panicle, is distinct by indument, long-petiolate leaves entire or nearly so, stamens equaling calyx, subsessile anthers.— Slopes of Volcan de Agua, Dept. Zacatepequez, alt. 10,000 feet, April, 1890, J. D. S. (Ex Pl. Guat. qu. edid. J. D. S. 2172.)

Chorisia soluta.— Calyx shortly pedunculate, 3-bracteolate, ligneous, cupulate-campanulate (20 lines long), aureolanate within, irregularly 5-lobed: petals distinct, linear-spatulate (5–6 in. $\times$ 10 lines), apex emarginate, sericeo-tomentose and fuscous without, glabrate and red within: stamens three-fourths as long; column short (10 lines), annulate at apex;

exterior lobes one-fifth as long, ovate, entire, hirsute; interior branches 10–12, filiform, 2-antheriferous, anthers long and anfractuose: ovary free, imperfectly 5-celled, ovules pyriform.—A tree with the gigantic trunk and flat widespreading head of *Bombax Ceiba* L., and with digitate leaves. The incomplete character is drawn from the only parts within reach of the collector—freshly fallen flowers. The staminal column partite to annulus into doubled number of branches is exceptional for the genus.—Shores of Lake Amatitlan, Dept. Amatitlan, alt. 3,900 feet, Feb., 1890, J. D. S. (Ex Pl. cit. 1924.)

Myrodia Guatemalteca.—Leaves elliptical or obovate-elliptical (8–10×3–4 in.), abruptly acuminate, obtuse base 3-nerved, veins pubescent, axils barbate: flowers solitary or geminate, axillary and extra-axillary, approximated: calyx twice longer than deflexed minutely 3-bracteolate pedicel, sericeous within, 5–6 unequal lobes ovate (2–3 lines): petals tomentulose, elliptic-oblong (1 in.), shortly unguiculate, half-exsert: staminal column shorter, its 5 lobes regularly 4-antheriferous: cells of ovary 2, 2-ovulate, style pentagonal, stigma bilobed: immature fruit ovoid (5 lines).—*M. funebris* Benth., *ex descr.* nearly related, differs by lanceolate leaves, subsessile solitary flowers, erose calyx equalling claws of petals and twice exceeded by 25–30-antheriferous staminal column.—Pansamalá forest, Dept. Alta Verapaz, alt. 4,000 feet, Jan., 1889, v. Türckheim (Ex Pl. cit. 1410): April, 1889, J. D. S. (Ex Pl. cit. 1634.)

Heteropteris retusa.—Leaves short-obovate (20–24×15–18 lines), each end obtuse, apex retuse and cuspidate, sparsely pilose, veins rufo-pubescent and uni-glandular above base of lowest pair; petiole terete, bi-glandular at or below apex: panicles rufo-tomentulose, 2–3-fasciculate from axils of reduced upper leaves and terminal, umbellately compound, sub-equalling leaves; pedicels 3–5, bracteolate in middle, exceeding flowers: sepals minute: petals twice longer (2 lines), oblong, base rounded, carinate, shortly unguiculate, crimson; the interior broader with stout claw and denticulate: filaments exceeding calyx, anthers oblong, connective incrassate: styles a little shorter.—Near *H. cotinifolia* Ad. Juss., but with different leaves and glands, solitary panicles, smaller flowers, etc.—Erect shrub 8–12 feet high with brachiate lenticellate branches, along streams near Escuintla, Dept. Escuintla, alt. 1,100 feet, March, 1890, J. D. S. (Ex Pl. cit. 2068.)

RUBUS OCCIDENTALIS L., var. **grandiflora** Focke.—Differt a planta typica floribus fere duplo majoribus post anthesin nutantibus.—Slopes of Volcan de Aqua, alt. 8,500 feet, April, 1890, J. D. S. (Ex Pl. cit. 2168.)

Potentilla Donnell-Smithii Focke.—Caudiculi e radice multicipite breves lignosi stipulis annorum præcedentium scariosis vestiti. Caules prostrati digitales pubescentes, apice ascendentes ramosi pauciflori. Folia inferiora petiolata imparipinnata trijuga vel bijuga, foliolis approximatis, *infimis majoribus manifeste petiolulatis*, aliis lateralibus subsessilibus. Foliola inæquilatera sub-ovata inciso-serrata, serraturis confertis obtusis, utrinque appresse pilosa. Folia superiora ternata breviter petiolata, foliolis illis foliorum inferiorum similibus. Stipulæ vaginantes petiolo adnatæ, inferiores scariosæ, supremæ magna ex parte liberæ ovatæ dente uno alterove præditæ. *Flores breviter pedunculati*, pedunculo diametrum floris fere æquante, folia vix superante. *Bracteolæ calycinæ* sepalis fere æquilongæ *trilobæ* (vel inciso-tridentatæ) ; sepala late ovata, interdum dente uno alterove prædita. Petala obovata sepalis longiora lutea. Styli subterminales basi incrassati. Torus hirsutus.—Planta alpina humilis. Habitu ad *P. dissectam* Pursh, *P. Richardii* Lehm. et *P. Ehrenbergianam* Schldl. accedit, sed et ab his et ab omnibus aliis speciebus Americanis distinguitur bracteolis calycinis trilobis.—Bottom of crater of extinct Volcan de Agua, alt. 12,000 feet, April, 1890, J. D. S. (Ex Pl. cit. 2144.)

AGRIMONIA PARVIFLORA Ait ? var. **macrocarpa** Focke.—Differt a planta typica fructibus majoribus, foliolis paucioribus et brevioribus.—The determination is provisional. In many cases it is very difficult to trace the limits between the closely allied species of *Agrimonia*. The Guatemala specimen agrees in essential points with the *A. parviflora* of the United States. Its fruits are much larger, but show the same shape and the same direction of spines. The leaflets are less numerous and nearly as narrow, but shorter. These differences are not very important, and therefore I prefer at present to consider the plant as a variety. A more complete acquaintance, however, will perhaps disclose distinctive marks of greater importance. (Focke).—Coban, Dept. Alta Verapaz, alt. 4,300 feet, Feb., 1889, v. Türckheim. (Ex Pl. cit. 1409.)

Tibouchina Bourgaeana Cogn. (§ DISTANTHERA); ramis setis arcte adpressis basi tuberculatis subsparse armatis; foliis mollibus, anguste lanceolatis, longiuscule acuminatis, basi satis attenuatis, subtiliter serrulatis, utrinque adpresse pilosis, 5-nerviis, nervis lateralibus basi longiuscule coalitis; cymis plurifloris; calycis tubo ovoideo, lobis subulatis, tubo brevioribus; staminibus omnine glabris, subaequalibus; antheris brevibus, oblongis, apice obtusis, connectivo basi brevissime producto. Rami graciles, erecti. Petiolus 0.5–1.5cm. longus. Folia 4–8cm. longa, 8–17mm. lata. Calycis tubus 2.5mm. longus; lobi 1.5–2mm. longi. Petala lilacina, ciliata, apice setoso-apiculata, 4–5mm. longa. Antherae 1.5mm. longae. Stylus 4mm. longus.—Yzabal, Dept. Yzabal, alt. 100 feet, April, 1889, J. D. S. (Ex Pl. cit. 1514).

Monochaetum diffusum Cogn. (§ EUMONOCHAETUM); ramis junioribus pilis patulis simplicibus eglandulosis densiuscule longeque hirtellis; foliis longiuscule petiolatis, membranaceis, oblongo-lanceolatis, acutiusculis, triplinerviis, subadpresse sparseque setulosis praecipue subtus ad nervos; cymis diffusis, plurifloris; calyce pilis patulis glandulosis sparse hirtello, lobis tubum aequantibus.—Rami graciles, obscure tetragoni, fuscescentes, satis ramulosi, diffusi. Petiolus filiformis, 4–8mm. longus. Folia supra laete viridia, subtus pallida, 3–5cm. longa, 1–1.5cm. lata. Flores rosei, longe graciliterque pedicellati. Calycis tubus cinereus, campanulatus, 4–5mm. longus; lobi patuli, triangulari-lineares, 4–5mm. longi. Petala obovata, apiculata, 6–7mm. longa. Antherae majores arcuatae, 4mm. longae, cauda paulo incrassata elongata sursum revoluta; minores subrectae, 3mm. longae, cauda subfiliformi adscendente.—Pinula, Dept. Guatemala, alt. 4400 feet, Feb., 1890, J. D. S. (Ex Pl. cit. 2217).

Conostegia hirtella Cogn.; ramis junioribus petiolisque setulosis; foliis oblongo-lanceolatis, basi acutis vel acutiusculis, apice longiuscule acuminatis, integerrimis vel vix undulato-denticulatis, 5-plinerviis, supra sparsissime setulosis, subtus ad nervos leviter hirtellis et vix furfuraceis caeteris glabratis; alabastris anguste obovoideis, acutiusculis, vix furfuraceis.—Rami satis graciles, obscure tetragoni, juniores densiuscule et breviuscule hirtelli. Petiolus supra densiuscule breviterque hirtellus caeteris breviter furfuraceus, 1–2.5 cm. longus. Folia membranacea, paulo disparia, 13–19 cm. longa, 4–5.5 cm. lata. Paniculae furfuraceo-hirtellae, sub-

multiflorae, fere 1 dm. longae; flores 5-meri, distincte pedicellati. Alabastra 6 mm. longa, 3.5 mm. crassa. Petala late obovata, profunde emarginate, 5–6 mm. longa. Antherae oblongo-lineares, 2.5 mm. longae. Stylus crassiusculus, 3 mm. longus, stigmate obtuso.—Pansamalá forest, alt. 3,800 feet, May 1887, v. Türckheim. (Ex Pl: cit. 1233.) Distributed as *C. lasiopoda* Benth.?

Miconia Guatemalensis Cogn. (§ OCTOMERIS); foliis breviuscule petiolatis, membranaceis, ovatis, breviter acuminatis, basi rotundatis vel vix emarginatis, integerrimis vel minutissime denticulatis et setulis brevissimis patulis densiuscule ciliatis, 5-nerviis, supra sparse setulosis, subtus ad nervos leviter furfuraceis caeteris brevissime subsparseque stellato-puberulis; paniculis laxiusculis, submultifloris; floribus 5-meris; calyce leviter furfuraceo, lobis brevissimis, late rotundatis.—Frutex ramis robustiusculis junioribus petiolis paniculisque brevissime et densiuscule stellato-pub erulis. Petiolus 1–4 cm. longus. Folia 6–9 cm. longa, 3. 5–5 cm. lata. Paniculae 4–8 cm. longae; pedicelli saepius vix 1 mm. longi. Calycis tubus suburceolatus, 2 mm. longus; lobi vix 1 mm. longi. Petala ut videtur rubra, 3 mm. longa. Stylus 4 mm. longus.—Tamahu, Dept. Alta Verapaz, alt. 5,000 feet, July 1887, v. Türckheim. (Ex Pl. cit. 924, 1317.)

Miconia Tuerckheimii Cogn. (§ OCTOMERIS); ramis junioribus petolis paniculis foliisque subtus brevissime denseque stellato-tomentosis; foliis anguste ovatis, breviter acuminatis, minute denticulatis, 7-nerviis, supra brevissime denseque villoso-hirtellis; floribus 4-meris, pedicellatis; calyce stellato-tomentoso et sparse glanduloso-piloso.— Petiolus 3–8cm. longus. Folia submembranacea, basi rotundata, 2–2.5dm. longa, 12–14 cm. lata. Paniculae 2.5 dm. longae; pedicelli glandulosi, 1–3 mm. longi. Calyx 3 mm. longus, breviter lobatus. Petala 3 mm. longa.—Coban, alt. 4,800 feet., Mch. 1881, v. Türckheim (Ex Pl. cit. 581).

Clidema laxiflora Walp., var. *β.* **longipetiolata** Cogn.—Rami petioli pedunculique longiore pilosi. Petiolus 5–7 cm. longus. Folia profundiore inaequaliter serrulata. Calyx longe denseque hirsutus.—Pansamalá, alt. 3,800 feet, June 1885, v. Türckheim (Ex Pl. cit. 707). Distributed as typical.

Clidemia Donnell-Smithii Cogn. (§ SAGRAEA); ramis junioribus petiolisque pilis patulis elongatis pallide fulvis

dense vestitis; foliis submembranaceis, longiuscule petiolatis, oblongis vel ovato-oblongis, subintegerrimis, longiuscule acuminatis, basi rotundatis, 7-nerviis, supra breviter sparseque setulosis, subtus densiuscule longeque pilosis; cymis parvis, paucifloris; pedicellis longiusculis, minute bibracteolatis; calyce densiuscule longeque hirtello, dentibus exterioribus subulatis, tubum aequantibus.—Rami robustiusculi, teretes, simplices. Petiolus robustiusculus, 2–6 cm. longus. Folia saepius satis disparia, supra intense viridia, subtus viridi-cinerea, 10–18 cm. longa, 4.5–7.5 cm. lata. Cymae patulae, 2–3 cm. longae; pedicelli filiformes, 6–8 mm. longi; bracteolae subulatae, 1 mm. longae. Calycis tubus campanulatus, 3 mm. longus; dentes exteriores erecto-patuli, flexuosi, 2.5–3 mm. longi. Petala rubra, obovata, apice rotundata, 4–5 mm. longa. Antherae oblongo-lineares, 1.5 mm. longae. Stylus capillaris, 5–7 mm. longus, stigmate punctiformi.—Pansamalá, alt. 3,800 feet, July, 1888, v. Türckheim. (Ex Pl. cit. 1433.)

JUSSIÆA PERUVIANA L., var. **glaberrima**.—Absolutely smooth throughout: peduncle and calyx nitidous: sepals mucronate and denticulate: flowers 2 in. in diameter: stamens 8, oblong anthers equalling filaments: capsule elongated.—Shrub 12 ft. high, swamp near Dueñas, Dept. Zacatepequez, alt. 5,000 ft., Apr. 1890, J. D. S. (Ex Pl. cit. 2130.)

JUSSIÆA PILOSA H. B. K., var. **robustior**.—Densely branched shrub, 6–8 ft. high, angulate with decurrent petioles and branches: leaves crowded, small, fleshy, scabrid, sprinkled with red glands, margin rubescent: bracts minute, subulate, gland-stipellate: flowers 6-merous, sepals splitting in fruit to 7–9: seeds of one of the cells often biseriate.—Swamp on Lake Antonio near Dueñas, alt. 5,000 ft., Apr. 1890, J. D. S. (Ex Pl. cit. 2123.)

Passiflora (§ CIEGA) **clypeophylla** Mast.—Glabra, ramis complanatis sulcato-striatis; petiolis 20–30 mm. longis medio glandulis duabus majusculis sessilibus munitis; stipulis herbaceis lineari-subfalcatis acutis; laminis circa 6 cm. long. 10 cm. lat. glabris submembranaceis peltatis 5-nerviis subrotundis vel obscure trilobis margine incrassato albido angusto circumdato; pedunculis petiolos subaequantibus simplicibus supra medium articulatis; bracteis caducis minutis; floribus diametro 10–12 mm. tubo brevi campanulato intus

plicato; sepalis oblongis glabris; corona fauciali biseriata filamentosa, filis externis sepala subaequantibus basi purpureis apicem versus luteis, filis intimis lineari-clavatis truncatis procedentibus tertia parte brevioribus; corona media membrancea longitudinaliter plicata purpurea margine in dentes acutos inflexos margine eversos divisa, coroną infra mediana annulari; gynophoro glabro; ovario globoso glabro. —Barranca del Rubelcruz, Dept. Alta Verapaz, alt. 2,500 ft., April, 1889, J. D. S. (Ex Pl. cit. 1625.)

Passiflora (§ DECALOBA) **allantophylla** Mast.—Setulosa, ramis herbaceis compressis sulcato-striatis; petiolis 15 mm. eglandulosis; stipulis lineari–subulatis; laminis circa 20 mm. long. 40–50 mm. lat. membranaceis glabris subtus sparse ocellatis palmatim 3-nerviis basi late cordatis vel subrotundatis, ad medium bilobatis, lobis divergentibus rotundatis nervo excurrente mucronulatis; lobulo intermedio subobsolete truncato sinu latissimo; pedunculis geminis petiolos aequantibus vel superantibus simplicibus vel superne cymoso-tribrachiatis; bracteis setaceis caducis; floribus 10–12 mm. diam., tubo brevi patelliformi basi intruso extus intusque glabro; sepalis herbaceis oblongis obtusis; petalis hyalinis albidis sepalis parum brevioribus; corona fauciali 1-seriata filamentosa, filis ligulatis flavidis basi purpurascentibus quam petala parum brevioribus; corona mediana membranacea tubulata apice in lobos acutos inflexos fimbriatulos ad margines eversos divisa; coronâ infra mediana carnosula anguste annulari; corona basilari praecedenti conformi; gynophoro glabro; ovario subgloboso glabro.—Santa Rosa, alt. 5,000 feet, Sept. 1888, v. Türckheim (Ex Pl. cit. 1425.)

Passiflora (§ DECALOBA) **transversa** Mast.—Glabrescens vel subhirtella; ramis complanatis sulcato-striatis; petiolis 2 cm. long. eglandulosis; stipulis subulatis herbaceis; laminis 4 cm. long. 12–13 cm. lat. subcoriaceis glabris transversim ellipticis, 3-nerviis, basi ocellatis, apice mucronulatis nonnunquam excisis; pedunculis petiolis dimidio brevioribus puberulis bracteis setaceis munitis. Floribus diametro 35 mm. tubo patulo brevi extus puberulo intus glabro; sepalis herbaceis oblongo-obtusis; petalis sepalis parum brevioribus albidis; corona fauciali filamentosa biseriali, filis extimis liguliformibus flavis petalis paulo brevioribus, filis intimis fere dimidio brevioribus; corona media membranacea tubulata superne in dentibus puberulis inflexis divisa; corona basilari carnosula

annulari; gynophoro glabro pentago; filamentis gracilibus; ovario oblongo glabro.—Masaqua, Dept. Escuintla, alt. 400 feet, April, 1890, J. D. S. (Ex Pl. cit. 2099.)

Passiflora (§ DECALOBA) **ornithoura** Mast.—Glabra; ramis compressis sulcato-striatis; stipulis lineari-subulatis caducis; petiolis circa 25mm. long. eglandulosis; laminis 10cm. long. 5 cm. lat. membranaceis subtus sparse ocellatis basi cuneatis vel subrotundatis, palmatim 3-nerviis infra medium bilobatis, lobis late divergentibus lanceolatis, secus nervum medianum fascia albida angusta notatis, lobo intermedio deltoideo subobsoleto; pedunculis geminis simplicibus petiolos aequantibus; bracteis minimis filiformibus acutis; floribus diametri 2cm.; tubo brevi patelliformi extus puberulo intus nitido; sepalis herbaceis oblongo-obtusis; petalis hyalinis albidis sepalis tertia parte brevioribus; corona fauciali 1-seriata e filis crassis clavatis petalis dimidio brevioribus constante; corona mediana membranacea tubulata longitudinaliter plicata margine lobata lobis lanceolatis inflexis marginibus eversis fimbriatulis; corona basilari annulari carnosula; gynophoro tereti glabro; ovario globoso glabro; fructu globoso magnitudine cerasi parvi purpureo; seminibus albidis transverse sulcatis, striisque longitudinalibus notatis.—Dueñas, alt. 5,000 feet, April, 1890, J. D. S. (Ex Pl. cit. 2136.)

Passiflora (§ DECALOBA) **dicthophylla** Mast.—Glabra, ramis compressis striatis; petiolis circa 25 mm. eglandulosis; stipulis lineari-subulatis; laminis 5–6 cm. long. 4–5 cm. lat. membranaceis sparse ocellatis vel eglandulosis basi subcuneatis vel subrotundatis palmatim 3-nerviis, infra medium 2-lobatis, lobis divergentibus oblongis obtusiusculis, mucronulatis, sinu lunatim exciso lobulo intermedio obsoleto; pedunculis geminis petiolos aequantibus vel superantibus simplicibus; bracteis setaceis minutis munitis; floribus diametro 15 mm., tubo brevi late campanulato; sepalis herbaceis oblongis obtusis; petalis albidis sepalis dimidio brevioribus; corona fauciali filamentosa, filis uniseriatis lineari-clavatis petalis fere dimidio-breviorbus; corona media membranacea late tubulata plicata margine profunde dentata, dentibus fimbriatulis; corona infra mediana annulari crassa; gynophoro glabro; ovario globoso nitido; fructu magnitudine cerasi globoso glabro purpureo; seminibus compressis apice productis tranversim annulato striisque verticalibus notatis.—Dueñas, alt. 5,000 feet, April 1890, J. D. S. (Ex Pl. cit. 2143).

Melothria Donnell-Smithii Cogn. (§ EUMELOTHRIA); monoica; foliis membranaceis, ovatis vel ambitu suborbicularibus, utrinque punctato-scabris, integris vel usque ad medium 3–5-lobatis, lobis apice saepius rotundatis terminali interdum acuto; cirrhis simplicibus; racemis masculis saepius 3–5-floris, petiolo brevioribus; petalis leviter emarginatis; antheris subquadratis, loculis paulo arcuatis, connectivo lato; floribus femineis longepedunculatis, fructu majusculo, triloculari, concolore; seminibus immarginatis.—Rami graciles, elongati, glabri vel vix pilosuli, laeves, alternatim albo et viridi longitudinaliter striati. Petiolus satis gracilis, brevissime subsparseque hirtellus vel glabratus, 2–5 cm. longus. Folia ovata, integra vel saepius paulo lobata, apice acuta, 6–8 cm. longa, 5–7 cm. lata, supra intense viridia, subtus paulo pallidiora et ad nervos interdum brevissime hirtella, margine minute remoteque denticulata; sinus basilaris saepius angustus, 1–1.5 cm. profundus. Cirrhi graciles, sulcati, glabri. Pedunculus communis masculus gracilis, puberulus, 1.5–3 cm. longus, apice 2–15-florus; pedicelli 3–10 mm. longi. Calyx campanulatus, basi obtusus, glaber, 3 mm. longus, minute denticulatus. Corolla tenuissime furfuracea, fere 1 cm. lata, segmentis patulis. Antherae ciliatae, 1 mm. longae. Flores feminei solitarii. Pedunculus fructiferus filiformis, 2–6 cm. longus. Fructus ovoideus, 3.5–4 cm. longus, 2.5 cm. crassus. Semina pallida, ovata, 3.5–4 mm. longa, 2–2.5 mm. lata. Species *M. scabrae* Naud. (Cogn. in DC. Monogr. Phan. III, 582) proxima.—Masagua, alt. 400 feet, April, 1890, J. D. S. (Ex Pl. cit. 2203).

Var. *β.* **hirtella** Cogn.—Rami sparse hirtelli. Petiolus densiuscule hirtellus, 3–7 cm. longus. Folia ambitu late ovata, plus minusve lobata, apice saepius obtusa.—Escuintla, alt. 1100 feet, March, 1890, J. D. S. (Ex Pl. cit. 2206).

Var. *γ.* **rotundifolia** Cogn. Rami petiolique ut in typo. Folia ambitu suborbicularia, saepius satis profunde 5-lobata, lobis apice rotundatis.—San Luis, Dept. Escuintla, alt. 1,000 feet, Mch. 1890, J. D. S. (Ex Pl. cit. 2,208).

Anguria oblongifolia Cogn.; tota glaberrima; foliis breviter petiolatis, integris, oblongis, vix acuminatis, basi acutis, regulariter penninervis; floribus parvis, sessilibus, ad apicem pedunculi communis capitatis; antheris rectis, oblongis, tubo calycis paulo brevioribus, appendice vix perspicua leviter papillosa coronatis.—Rami graciles, laeves, simplices, elongati, striati. Petiolus gracilis, 2–3 cm. longus. Folia tenuiter

membranacea, laete viridia, utrinque laevia, margine integerrima vel vix undulata, 10–13 cm. longa, 5–6 cm. lata; nervi tenues, subtus vix prominentes. Cirrhi graciles, longiusculi, tenuiter striati. Pedunculus communis masculus gracilis, 2.5 dm. longus, apice 8–10-florus. Calycis tubus anguste oblongus, basi rotundatus superne satis constrictus, teretiusculus, 8 mm. longus; dentes lanceolato-lineares, erecto-patuli, 1 mm. longi. Petala suborbicularia, uninervia, extus tenuiter furfuracea, 3 mm. longa. Antherae 5 mm. longae, 1.5 mm. latae. Flores feminei et fructus ignoti. Species *A. longipedunculatæ* Cogn. (Monogr. Phan. III, 673) proxima.—Rio Dulce, Dept. Livingston, sea level, Mch. 1889, J. D. S. (Ex Pl. cit. 1510).

Anguria diversifolia Cogn. (§ V. ANTHERAE MUTICAE); tota glaberrima; foliis breviter petiolatis, simplicibus, trinerviis, modo integris vel vix trilobatis anguste ovatis acutis basi oblique subtruncatis, modo fere usque ad basim tripartitis segmentis lanceolatis breviter acuminatis inferne contrictis; floribus parvis, sessilibus, ad apicem pedunculi communis breviter spicatis subcapitatis; antheris oblongis, rectis, muticis.—Rami satis graciles, laeves, sulcati, paulo ramulosi. Petiolus gracilis, 1–2.5 cm. longus. Folia membranacea, laete viridia, utrinque laevia, margine integerrima, 8–14 cm. longi; nervi crassiusculi, subtus leviter prominentes. Cirrhi crassiusculi, elongati, inferne sulcati. Pedunculus communis masculus robustiusculus, sulcatus, 2–3.5 dm. longus, apice 10–25-florus. Calycis tubus anguste oblongus, basi subacutus, superne valde constrictus, teretiusculus, 10–11 mm. longus; dentes lineares, erecto-patuli, 2 mm. longi. Petala obovata, extus dense furfuracea, 5–6 mm. longa. Antherae 4–5 mm. longae, 1.5 latae. Flores feminei et fructus ignoti.—Pansamalá, alt. 3,800 feet, November, 1888, v. Türckheim (Ex Pl. cit. 1414.)

Gurania Donnell-Smithii Cogn.; foliis ambitu suborbicularis, basi profunde emarginatis, usque ultra medium trilobatis, lobis anguste ovatis, abrupte longiuscule angusteque acuminatis; calycis tubo breviusculo, ovoideo, tomentoso-cinereo, segmentis subulatis, uninerviis, rubrocinereis, utrinque densiuscule breviterque puberulis, tubo duplo longioribus; antheris late-oblongis, inferne replicatis, connectivo lato, apice appendiculato.—Rami robusti, sulcati, densiusculi et breviuscule hirtelli. Petiolus robustus, striatus, longiuscule

denseque villosus, 8–10 cm. longus. Folia membranacea, utrinque breviuscule sparseque pilosa praecipue subtus ad nervos, supra intense viridia, subtus satis pallidiora, margine remote spinuloso-denticulata, 2.5 dm. longa lataque; lobi exteriores paulo breviores, terminalis basi satis constrictus; nervi robusti, utrinque paulo prominentes, duo laterales basilares trifurcati, imum sinum marginantes; sinus basilaris 5 cm. profundus. Cirrhi robusti, sulcati, breviusculi villosi. Pedunculus communis masculus robustus, striatus, densiuscule breviterque villosus, 3.5–4 dm. longus, apice 30–40-florus; flores subsessiles. Calycis tubus 8–10 mm. longus, 6–7 mm. latus; lobi erecti, 1.5–2 cm. longi. Petala conniventia, linearia, acutiuscula, extus furfuracea, 6–7 mm. longa, vix 1 mm. lata. Antherae 5 mm. longae, 2 mm. latae, connectivo glabro, apice in appendicem papillosam 1 mm. longam producto. Flores feminei et fructus ignoti. Species *G. Levyanae* Cogn. (l. c. 686) proxima.—Rio Chactá, Dept. Alta Verapaz. alt. 2.500 feet, April 1889, J. D. S. (Ex Pl. cit. 1511.)

Sicyos longisepalus Cogn. (§ Eusicyos) ; foliis longiuscule petiolatis, ambitu cordato-ovatis, angulato 5-lobatis, utrinque punctato-scabris, lobis triangularibus, nervis lateralibus imum sinum non marginantibus; cirrhis bifidis; racemis masculis simplicibus, 8–20-floris, folio longioribus; calycis dentibus elongatis; pedunculis femineis apice 3–4-floris; fructu ovoideo, satis compresso, acuto vel obtusiusculo, vix puberulo et setis elongatis persistentibus subsparse vestito.—Rami graciles, sulcati, subglabri. Petiolus robustiusculus, striatus, brevissime puberulus, 3–7 cm. longus. Folia tenuiter membranacea, intense viridia, margine remote vix denticulata, 8–12 cm. longa, 7–10 cm. lata, lobis lateralibus brevibus, acutiusculis, terminali majore, acutissimo; nervi vix prominentes, supra vix puberuli; sinus basilaris acutus, 1–3 cm. profundus. Cirrhi robustiusculi, elongati, striati, glabrati. Pedunculus communis masculus gracilis, striatus, brevissime puberulus, 1–2.5dm. longus, superne vel fere usque ad medium floriferus; pedicelli filiformes, demum reflexi, 5–10 mm. longi. Calycis tubus subrotatus, vix puberulus, 5 mm. latus; dentes patuli, lineari-subulati, 4 mm. longi. Corolla spureo-alba, vix puberula, segmentis patulis, late ovato-triangularibus, obtusiusculis, 5–7 nerviis, 4 mm. longis. Pedunculus fructiferus 3 cm. longus. Fructus basi rotundatus, 8–10 mm. longus; setae 3–6 mm. longae. Species

S. Deppei G. Don (Cogn. l. c. 876) proxima.—Antigua, Dept. Zacatepequez, alt. 5,000 feet, April, 1890, J. D. S. (Ex Pl. cit. 2202.)

Cephaelis glomerulata (§ CEPHAELIDEÆ Muell. Arg. in Fl. Brasil.)—Dichotomous, glabrous: stipules solitary, triangular-truncate, apex fimbriate: leaves oval-lanceolate ($4–5 \times 1\frac{1}{2}–2$ in.), acuminate, base acute, patent secondary nerves about 14 uniting in marginal arches: heads of bracteose glomerules subsessile, semi-globose (9 lines high, 1 in. broad); bracts coriaceous, pallid, margin virescent or violaceous, the 6–8 exterior oblate-roundish, of glomerules obovate passing into shorter spatulate membranaceous conduplicate bractlets: calyx scarious ($1\frac{1}{2}$ line), two-thirds free, unequally subulate-toothed: corolla white, half-exsert from bractlet, slender (6 lines), one-fourth-lobed, upper half cano-pubescent within: anthers (2 lines) exceeding filaments: bi-lobed disk equalling ovary; drupe ovoid (3 lines), sulcate, blue.—Shrub 3–4 ft. high with habit and leaves of *C. dichotoma* Rudge and *Psychotria Martiana* Muell. Arg., but differing from both by developed bractlets of glomerules and of flowers.—Swampy woods on Rio Dulce, sea-level, Mch. 1889, J. D. S. (Ex Pl. cit. 1637).

EXPLANATION OF PLATE I.—Fig. 1, flowering branch. Fig. 2, head with all but one of the bracts removed. Fig. 3, glomerule. Fig. 4, exterior bract. Fig. 5, exterior bractlet. Fig. 6, interior bractlet. Fig. 7, stipule. Fig. 8, flower. Fig. 9, corolla of long-styled flower laid open. Fig. 10, vertical section of short-styled flower with corolla removed. Fig 11, drupe. (Figs. 1 and 2 are natural size: the others are variously magnified.)

LOBELIA LAXIFLORA H. B. K., VAR. **insignis**.—Glabrous in every part: stem simple, stout, 3–4 ft. high: leaves densely confert, linear-lanceolate (7×1 in.), sessile, glandular teeth appressed: peduncles bractless, nearly equalling leaves: flowers 2 in. long: calyx-segments one-fifth as long, linear, twice exceeding tube: corolla carinately nerved; tube half as broad as long, yellow varied with red; divisions of upper lip red on both sides; lower lip plicate, half as broad as long, yellow margined with red.—Mr. Hemsley refers to the type a plant collected by Salvin in similar locality. The congested large leaves and flowers impart a distinct habit.—Slopes of Volcan de Agua, alt. 10,000 feet, April, 1890, J. D. S. (Ex Pl. cit. 2173.)

MACLEANIA CORDATA Lemaire, var. **linearifolia**.—Leaves obscurely penninerved, above conspicuously reticulated, linear-lanceolate ($4–5 \times \frac{1}{2}–\frac{3}{4}$ in.), regularly tapering from

rounded base to acute mucronulate apex.—Pansamalá forest, alt. 4,000 feet, July 1887, v. Türckheim (Ex Pl. cit. 1332.)

ARCTOSTAPHYLOS PUNGENS H. B. K., *(not Gray)*, var. **cratericola.**—Younger parts and racemes puberulous: branchlets trigonal from stout short (1 line) petioles: leaves crowded, smooth and shining, punctate beneath, oval or obovate (6–7 × 4–5 lines), each end obtuse, apex callose: capituliform racemes scarcely equalling leaves, 4–6-flowered, coloured bracts exceeding abbreviated pedicels: filaments circularly dilated at middle, chiefly beardless; anthers nearly half as long, equalling short smooth awns: style exceeding stamens.—Tufted, with prostrate branches a foot or more long, on rocks in the crater of Volcan de Agua, alt. 12,000 feet, April 1890, J. D. S. (Ex Pl. cit. 2159.)

SOLANUM OLIVÆFORME, Botan. Gazette, XIV. 28, XV. 28.

EXPLANATION OF PLATE II.—Fig. 1, portion of a plant in flower. Fig. 2, portion of a plant in fruit. Fig. 3, vertical section of flower. Fig. 4, stamen. Fig. 5, pistil. Fig. 6, transverse section of fruit. Figs. 1 and 2 are natural size; the others are variously enlarged.

Daphnopsis Tuerckheimiana (§ NORDMANNIA Benth. et Hook.)—Epiphytal (?), dichotomous: petioles short, incrassate; leaves coriaceous, glabrous, ovate-lanceolate or lanceolate (3–5 in.), caudately produced, base acute, margin revolute, veins immersed: umbelliform staminate fascicles lateral and terminal, subsessile, bracteate, pilose, 5–7-flowered, pedicels short: perianth 5–6-times longer (3½–4 lines), clavate, smooth within, lobes one-fifth as long with alternate ones the broader: superior stamens partly exsert, interior inserted above middle of tube: abortive ovary hirsute, globose, equalling style, ovule manifest; stipe long as pistil (½ line); scales as long, united in cylindrical dentate sheath splitting variously: fertile flowers not seen.—Inflorescence apparently similar to that of a recent Brazilian species, *D. Sellowiana* Taubert, Bot. Jahrb. XII, Beibl. 7, which seems incorrectly referred to the section NEIVIRA Griseb.—Pansamalá forest, alt. 3,800 feet, Sept. 1886, v. Türckheim. (Ex Pl. cit. 1039.)

MYRIOCARPA LONGIPES Liebm., var. **Yzabalensis.**—Leaves round-oval, abruptly cuspidate, petioles from a third to nearly as long and like veins strigillose: branches of pistillate inflorescence 2–3, twice dichotomous, flowers sessile: achenia black and shining, scabrid with sparse short hairs: stigma

conspicuous.—Shrub 6–8 ft. high, Monte Cachirulo, Dept. Yzabal, alt. 900 ft., Apr. 1890, J. D. S. (Ex Pl. cit. 1644).

Triuris brevistylis.—About 3 in. high, aphyllous: inflorescence uniparous, twice furcate, peduncles $\frac{1}{2}$–1 in. long, semi-amplexicaul bracts with rounded lobes at base: perianth-segments with twice longer appendages 3–4 lines long: styles pubescent, sub-terminal, capillary, deflexed, shorter than obtuse carpels of ovary; stigma oblique; fruit obovate, puberulous.—*T. diaphana* Miers, one-third as large, with cauline leaves, sheathing entire bracts, less developed inflorescence, is distinguished best by carpels elongated into terminal subulate styles.—On decayed trunks of trees, Pansamalá forest, alt. 3,800 feet, Sept. 1888, v. Türckheim (Ex Pl. cit. 1384).

NEPHRODIUM DUALE, described as new, BOT. GAZ., XV. 29, must be referred to *Aspidium ascendens* Hew., which in view of the distinctly reniform involucre of the present specimens may be better designated as *Nephrodium ascendens*. It has been known hitherto only from Jamaica.

Baltimore, Md.

[From the BOTANICAL GAZETTE, April, 1891.]

New or noteworthy Compositæ from Guatemala.

JOHN M. COULTER.

Mr. John Donnell Smith has placed in my hands for determination his recent and large collections of Compositæ from Guatemala. From the long and interesting list of species that these collections contain, the following have been selected for publication as being new or especially noteworthy. In the final and critical study of species the herbarium and library of Harvard University were used, and thanks are due to Dr. Sereno Watson for his courtesy in supplying every facility for such study. Mr. Henry E. Seaton, my assistant, made all the dissections and rendered valuable service in generic determinations.

VERNONIA TRIFLOSCULOSA HBK.—Published descriptions say that the leaves are "very entire," but specimens from San Luis, Depart. Escuintla (*J. D. S.* 2377), show that the larger leaves are apt to have some callous serrulations.

VERNONIA LEIOCARPA DC.—Abundant and very fine material from Pacaya, Depart. Amatitlan (*J. D. S.* 2405), show that the heads are at first cylindrical, becoming "ovate" only with ripening and spreading, and that they are mostly 3-(sometimes 4)flowered, rather than "5-flowered."

VERNONIA SALVINÆ Hemsl., var. **canescens,** n. var.—Leaves white beneath with a dense pannose tomentum.—Coban, Depart. Alta Verapaz, March, 1881 (*Türckheim* 583).

STEVIA COMPACTA Benth.—Specimens from Volcan de Agua (*J. D. S.* 2327) show that the under surface of the leaves is apt to be more or less woolly, and that the branches and inflorescence may have more or less floccose wool.

Eupatorium Donnell-Smithii n. sp.—Usually tall and rather stout perennial herb, hirsutely pubescent especially above and in the inflorescence (the spreading hairs of the stem somewhat glandular and viscid), often glabrate below, leafy up to and in the inflorescence: leaves opposite, broadly ovate, crenate-serrate, acute or acuminate, more or less pubescent or even hirsute especially beneath and on the prominent veins, 4 to 10 cm. long, 2.5 to 6.5 cm. broad, the lower long-petioled,

the uppermost short-petioled: heads 4 to 7 mm. high, numerous in a usually broad and ample leafy panicle, with white flowers: involucral bracts narrowly oblong, acute or acuminate, in about two nearly equal rows, thickened and conspicuously striate-nerved below, thinner and sometimes almost scarious at tip (especially the inner ones, which are also more decidedly acuminate or even mucronate-tipped), the outer ones more or less hirsute (often densely so), the inner ones glabrous or chiefly pubescent at tip: heads 40 to 50-flowered, with a flat or slightly convex receptacle and corolla-lobes bearded externally: achenes pubescent on the ribs, with scanty and barbellate pappus.—Aceituna, Depart. Guatemala, alt. 4600 ft., Feb. 1889 (*J. D. S.* 2374); Coban, Depart. Alta Verapaz, alt. 4300 ft., April, 1889 (*J. D. S.* 1603); Sarnac, Depart. Alta Verapaz, alt. 4600 ft., April, 1889 (*J. D. S.* 1602); Volcan de Agua, Depart. Zacatepequez, alt. 9500 ft., April, 1890 (*J. D. S.* 2329); Guatemala, Depart. Guatemala, alt. 5000 ft., Feb., 1890 (*J. D. S.* 2365).—This species seems closely related to *E. ciliatum* Less., to which it was referred by Hemsley (*Bourgeau* 1927) and John Donnell Smith (*Türckheim* 407, in 1887); but *E. ciliatum* has 18 to 22 flowers in a head and a glabrous corolla, while *E. Donnell-Smithii* has 40 to 50 flowers in a head and a bearded corolla.

Var. **parvifolium** n. var.—Much smoother, with smaller leaves, and but 20 to 35 flowers in a head.—Dueñas, Depart. Zacatepequez, alt. 5000 ft., April, 1890 (*J. D. S.* 2333).

EUPATORIUM AZUREUM DC.?—Apparently a form of this species was collected on Volcan de Agua, Depart. Zacatepequez, alt. 9000 ft., April, 1890 (*J. D. S.* 2326), in which the heads are but 12 to 16-flowered.

Eupatorium lyratum n. sp.—A stout apparently low branching perennial herb, softly pubescent throughout (the stem often even hirsute and more or less glandular): leaves alternate, the lower ones obovate, lyrately-pinnatifid and petioled, 5 to 9 cm. long, 2.5 to 4 cm. wide, gradually becoming less lyrate, irregularly toothed, sessile and even auriculate-clasping above, the uppermost ones (in the inflorescence) merely ovate (acute) and slightly toothed or entire: heads about 6 mm. high, rather few in a very loose irregular leafy panicle, with white flowers: involucral bracts linear-lanceolate to linear, acuminate, very lax in 3 or more unequal rows (some of them exceeding the head), the inner ones linear

and somewhat scarious, all more or less pubescent (the inner ones chiefly so at the tips), the outer ones often very much so (even hirsute) and more or less glandular: heads many-flowered, with a flat receptacle, and very long and slender corolla-tubes with very minute lobes (if any): achenes pubescent, with scanty but long and conspicuous, very minutely barbed soft white pappus.—Laguna Amatitlan, Depart. Amatitlan, alt. 3900 ft., March, 1890 (*J. D. S.* 2393). A species remarkable in its leaf characters and very long and slender corolla tube.

Eupatorium Rafaelense n. sp.—A small shrub, glabrous or minutely pubescent: leaves opposite, rather long petioled, ovate to lance-ovate, acute or acuminate, from crenate-serrate to minutely so or even entire, 3 to 7.5 cm. long, 2.5 to 3.5 cm. wide (but the numerous specimens show only the leaves of the branchlets): heads 9 to 18 mm. high, in loose or rather compact cymose clusters, terminating opposite divergent branchlets, the clusters becoming more compacted into a thyrsoid inflorescence above: involucral bracts linear-oblong, often purplish, acute or obtuse, in about 3 unequal lax rows, about half as long as the head, striate-nerved below, more or less pubescent and glandular (especially the outer ones), all with ciliate margins: heads 35 to 45-flowered, with a flattish or slightly convex receptacle and glabrous corolla: achenes scabrous-puberulent on the ribs, with conspicuous and barbellate white pappus.—San Rafael, Depart. Zacatepequez, alt. 6500 feet, April, 1890 (*J. D. S.* 2331); Guatemala, Depart. Guatemala, alt. 5000 feet, Feb., 1890 (*J. D. S.* 2368).

Eupatorium populifolium HBK.—This species seems to be very variable in the size of its leaves and flower clusters. Specimens from Laguna Amatitlan (*J. D. S.* 2400) are reed-like in habit, becoming 18 feet high, with leaves a foot or more long, compact thyrsoid panicles over a foot long and broad, and uniformly 11-flowered heads. Specimens from Cuyuta, Depart. Escuintla (*J. D. S.* 2399), are 12 feet high, with leaves not half as large, flower clusters only 5 or 6 inches long and 3 or 4 broad, and uniformly 9-flowered heads.

Eupatorium Tuerckheimii Klatt.—Specimens from Pansamalá (*Türckheim* 1342) show broader leaves than the type. They are ovate and long-acuminate, often nearly 2 inches broad.

EUPATORIUM AGERATIFOLIUM DC., var. **purpureum** nov. var.—Inflorescence with a dense purple glandular pubescence and the involucral bracts purple.—Coban, Depart. Alta Verapaz, alt. 4600 feet, May, 1887 (*Türckheim* 52).

Brickellia Pacayensis n. sp.—Closely related to *B. Hartwegi* (*Eupatorium rigidum* Benth. Pl. Hartw. 88) but the whole upper part of the plant is blackened with stipitate glands, the heads are 20 to 30-flowered, and the involucral scales are often much narrowed (linear-lanceolate to linear), longer, and more decidedly acuminate: the pappus is minutely but densely serrulate and the achenes densely soft pubescent. —Pacaya, Depart. Amatitlan, alt. 6000 feet, March, 1890 (*J. D. S.* 2389).

APLOPAPPUS STOLONIFERUS DC., var. **glabratus** nov. var. —Leaves glabrate, not all "very hirsute" as in the type.—A curious and handsome *Aplopappus* found on the crater of Volcan de Agua, Depart. Zacatepequez, alt. 12100 feet, April, 1890 (*J. D. S.* 2328).

Aphanostephus Pinulensis n. sp.—A stout very leafy and branching perennial 3 to 4.5 dm. high, rather glaucous and softly pubescent, the young leaves and branches and inflorescence more or less floccose: leaves punctate, lance-ovate to obovate in outline, the lower (blade) 9 cm. long, and on long petioles, gradually becoming smaller upwards, bipinnatifid, the oblong obtuse pinnæ more or less confluent and irregularly pinnately cleft and toothed (the whole plant with its conspicuous heads having an Achillea look): heads on short peduncles collected in a terminal corymbose cluster: bracts of the involucre lanceolate and strongly carinate: rays 5 to 8 mm. long, white, mostly reflexed with age: base of the corolla-tube in age prominently thickened and indurated, more or less persistent on the strongly angulate-costate whitish achene: pappus a very short crown with toothed edge.—Pinula, Depart. Guatemala, alt. 4400 feet, Feb., 1890 (*J. D. S.* 2407). A remarkable looking Aphanostephus on account of its broad bipinnatifid leaves.

Clibadium Donnell-Smithii n. sp.—Stem and inflorescence hirsute: leaves broadly ovate, mostly long-acuminate, with spinulose-crenulate serrulations, velvety pubescent beneath (even hirsute on the veins), scabrous above, 12 to 25 cm. long, 6 to 16 cm. broad, on long petioles: heads 4 to 5 mm. high,

in a rather small open cymose panicle: involucral bracts ovate, acute or cuspidate, ciliate on the margins, sparingly so on the back: corolla-lobes of sterile flowers with scanty pubescence if any: achenes obovate, conspicuously pilose at apex.—Guatemala, Depart. Guatemala, alt. 5000 feet, Feb., 1890 (*J. D. S.* 2347). This species is near *C. Surinamense* L., var. *asperum* Baker, but it differs in its comparatively smooth corolla-lobes of the sterile flowers, and strikingly in its large broad leaves, velvety pubescent beneath, and long petioles. From *C. arboreum* Donnell Smith it differs in its involucral bracts, leaves, and villous achenes.

MONTANOA OVALIFOLIA DC. is worthy of mention as being a plant reported before only from Bogota. These specimens are from Pacaya, Depart. Amatitlan, alt. 6000 feet, March, 1890 (*J. D. S.* 2352).

Tetragonotheca Guatemalensis n. sp.—Apparently closely allied to *T. Texana* Gray and Engelm.; but the leaves are deltoid, with mucronate serrulations and usually one or two prominent basal teeth, abruptly decurrent into a winged petiole which does not enlarge or clasp at base; leaves of the inflorescence ovate-lanceolate to lanceolate, acuminate, tapering gradually to a petiole: corolla-tubes, both of the ray and disk-flowers, very long and slender, more or less glandular pubescent, as is the whole inflorescence: pappus none in our specimens.—Senahú, Depart. Alta Verapaz, alt. 3500 feet, April, 1889 (*J. D. S.* 1592). A remarkable *Tetragonotheca* on account of its long and slender corolla tubes, the showy yellow ligules looking conspicuously slender-clawed.

Zexmenia Dulcis n. sp.—Pubescent and branching: leaves thickish, opposite, short-petioled, ovate or oblong, acute, distantly mucronate-serrate, scabrous on both sides but very much more so above, 6 to 9 cm. long, 3.5 to 5 cm. broad: heads on rather long peduncles (2.5 to 5 cm.), about 10 mm. high: involucral bracts lanceolate to ovate, mostly acute, scabrous with rough hairs: bracts of the receptacle winged on the back, with a sharply acute or acuminate minutely toothed apex: achenes of the ray 3-angled and 3-awned; those of the disk broadly winged, with usually two prominent unequal awns and numerous small squamellæ.—Rio Dulce, Depart. Livingston, alt. 0 feet, March, 1889 (*J. D. S.* 1607). Resembling *Z. scandens* Hemsl. somewhat, but differs from that species in its acute leaves, long-peduncled and smaller heads,

acute involucral bracts, merely 3-angled ray achenes, and broadly-winged disk achenes. Much more nearly related to *Z. trachylepis* Hemsl., but differs in its longer-pedunculate heads, acute involucral bracts, very acute or acuminate ("rounded at apex" in *Z. trachylepis*) chaff and unequal awns.

TITHONIA TUBÆFORMIS Lass.—Specimens collected at Pacaya, Depart. Amatitlan (*J. D. S.* 2390), show a peculiar habit. All the specimens in the Gray Herbarium are tall branching plants, while many of these are low and widely divaricate-branched at the very base.

MELANTHERA HASTATA Rich.—It is evident that this species must include *M. oxylepsis* DC., as in specimens from Pinula and Rio Amatitlan (*J. D. S.* 2342 and 2341) there are all gradations in the leaves from ovate-deltoid (*M. oxylepsis*) to hastately 3-lobed (*M. hastata*).

ENCELIA MEXICANA Mart.—This variable species was collected at Laguna Amatitlan (*J. D. S.* 2408), and in comparing it with specimens in the Gray Herbarium it seems evident enough that it should be considered to include *E. subaristata* Gray, *E. heterophylla* Hemsl., *E. fœtida* Hemsl., and *E. cordata* Hemsl., as indicated by Dr. Gray in an herbarium note.

SPILANTHES REPENS Michx. has been heretofore reported only from the southern United States. It now comes from Coban, Depart. Alta Verapaz, alt. 4300 feet (*J. D. S.* 1614).

SPILANTHES BECCABUNGA DC.—Specimens from Dueñas, Depart. Zacatepequez, alt. 5000 feet (*J. D. S.* 2125) show that the achenes are often pubescent.

BIDENS HETEROSPERMA Gray.—Specimens from Guatemala, Depart. Guatemala, alt. 5000 feet (*J. D. S.* 2351), show that the achenes are not always glabrous.

Bidens Antiguensis n. sp.—§ PSILOCARPÆA. Closely resembling *B. leucantha* Willd. but the rays (mostly present) narrowly oblong, acute, bright yellow (8 to 12 mm. long), and the 2 (rarely 3) rigid awns perfectly smooth and widely divaricate: exceedingly variable in pubescence, from glabrous to pilose-pubescent.—Antigua, Depart. Zacatepequez, alt. 5000 feet, April, 1890 (*J. D. S.* 2354); San Luis, Depart. Escuintla, March, 1890 (*J. D. S.* 2375).

Senecio Donnell-Smithii n. sp.—A very stout woolly-pubescent perennial: leaves alternate, thick, very broadly ovate to rotund in outline, cordate at base, undulately lobed and margined with blackish mucronulations, glabrous above,

densely whitish woolly beneath, 9 to 15 cm. long, 8 to 11 cm. broad, on stout petioles: heads 8 to 10 mm. high, in a large terminal very compact panicle: involucral bracts lanceolate, hirsute and purple-tipped: ray-flowers 6 to 8, with narrowly oblong yellow ligules 4 to 6 mm. long; disk-flowers 12 to 16. —Volcan de Agua, Depart. Zacatepequez, alt. 11000 feet, April, 1890 (*J. D. S.* 2362). Near *S. Aschenbornianus* Schauer, but differs in being stouter, with much more compact inflorescence, leaves very smooth above and densely woolly beneath, hirsute purple-tipped involucral scales, and more numerous disk-flowers. A very striking and handsome species.

Senecio Ghiesbreghtii Hort. Hal. Regel (*S. grandifolius* of authors, not Less.)—Specimens from Serraquitché, Depart. Alta Verapaz, alt. 2500 feet, (*J. D. S.* 1598), show that the characters of the species must be made to include not only ovate, but also elongated ovate or even obovate leaves, which are often acute at base as well as apex, and whose margins vary from sinuate-dentate to entire. These Guatemalan specimens also show that the disk-flowers may be fewer than 10, most of the heads containing but 5 or 6.

Senecio Ghiesbreghtii Hort. Hal. Regel, var. **pauciflorus** n. var. —Differs from the species in having fewer-flowered heads and hairy involucral bracts.—Sapote, Depart. Guatemala, alt. 4300 feet, March, 1890 (*J. D. S.* 2359); Chucaneb, Depart. Alta Verapaz, alt. 6000 feet, April, 1889 (*J. D. S.* 1606). *S. Ghiesbreghtii* has 4 to 6 ray-flowers and 10 disk-flowers; while the variety has uniformly 2 ray-flowers and 3 disk-flowers.

Senecio Cobanensis n. sp.—A woody-stemmed glabrous and very leafy plant: leaves scattered, thickish, elongated, narrowly lanceolate to oblanceolate and acuminate, on slender petioles, usually with distant serrulations, 10 to 14 cm. long, 2 to 2.5 cm. broad, readily falling off and leaving the stem covered with prominent scars: heads discoid, about 6 mm. high, in terminal rather loose corymbose panicles: involucral bracts about as long as the head, linear-oblong, obtuse or acutish, thick and rigid, keeled and somewhat saccate below (forming a truncate base to the head), often with very small accessory bractlets: disk-corollas about 6, deeply 5-lobed, the lobes usually with inflexed tips: achenes glabrous.—Coban, Depart. Alta Verapaz, alt. 4300 feet, May, 1887

(*Türckheim* 1158). A species perhaps nearest to *S. Candelariæ* Benth., but very distinct.

PEREZIA NUDICAULIS Gray.—Specimens from Guatemala, Depart. Guatemala (*J. D. S.* 2364) show that the leaves are not "all runcinate," some of them being simply ovate.

SENECIO KERMESINUS Hemsl. (*Gynoxys Hænkei* DC.)—Abundant material from Guatemala, Depart. Guatemala, alt. 5000 feet (*J. D. S.* 2356), shows that the original description of De Candolle needs emendation, as that was professedly drawn from imperfect specimens showing only the upper leaves. The lower leaves are coriaceous, rugose veiny, and more or less coarsely toothed. The heads also frequently have more numerous flowers. The plant is a very handsome one, climbing high over trees.

Wabash College, Crawfordsville, Ind.

[From the BOTANICAL GAZETTE, July, 1891.]

Undescribed plants from Guatemala. IX.

JOHN DONNELL SMITH.

(WITH PLATES XVI, XVII, XVIII.)

New species, described by Prof. L. Radlkofer and by Dr. M. T. Masters, are included among those of this paper.

Serjania rufisepala Radlk.—Scandens, fruticosa, glabra; rami canaliculato-6-sulcati, cortice subfusco; corpus lignosum simplex, sulcatum (fasciculis vasorum angulis subjectis corporum lignosorum periphericorum speciem interdum præbentibus ut in Serjania sordida affinibusque); folia biternata; foliola sat magna, elliptica, superiora acuminato-cuspidata, terminalia in petiolulum attenuata, lateralia sessilia, omnia integerrima, subcoriacea, penninervia, nervis lateralibus utrinque 5–6 validioribus arcuato-adscendentibus supra subtusque prominulis, utrinque glaberrima, nec nisi glandulis microscopicis adspersa, supra nitida, fuscescenti-viridia, punctis pellucidis subfuscis notata, epidermide mucigera; petioli omnes nudi; thyrsi in ramis lateralibus paniculatim congesti; cincinni sessiles; flores minores; sepala omnia rufescenti-tomentella; fructus (—immaturi tantum suppetebant) pulchre sanguinei, breviter ovati, loculis canescenti-puberulis, alis glabris.

Rami thyrsigeri diametro 4–5 mm. *Folia* circ. 20 cm longa, 14 cm lata; foliola terminalia petiolulo 8 mm longo adjecto 11 cm longa, 5 cm lata, lateralia decrescentim minora; petiolus communis 3.5 cm longus; stipulæ minutæ. *Thyrsi* circ. 7 cm longi, rhachi puberula; cincinni abbreviati; pedicelli breves, fructigeri 3 mm longi. *Flores (masculi)*: sepala interiora 2.5 mm longa. *Petala* sepalis vix longiora, intus glanduligera; squamæ superiores crista bifida appendiceque deflexa brevi dense villoso-barbata, inferiores crista oblique dentiformi instructæ. *Tori* glandulæ ovatæ, basi puberulæ. *Staminum* filamenta villosiuscula, antheræ glabræ. *Germinis* rudimentum parvum, trigonum, puberulum. *Fructus* (immaturus) 2–2.2 cm longus, 1.8 cm latus.—*Obs.* Affinis *Serj. sordidæ* Radlk. (Sect. xi; cf. Radlk. Serjaniæ Monogr. p. 272; Suppl. p. 141).

Tres Cruces, Dept. Alta Verapaz, alt. 4,800 ft., Apr. 1889, J. D. S., (Ex Pl. Guat., qu. edid. J. D. S., 1766).

Serjania psilophylla Radlk. (*Serjania spec.*, John Donnell Smith Enumeratio Plantarum Guatemalensium, Pars I, 1889, n. 1153.)—Scandens, fruticosa, glabra; rami 6-sulcati, cortice e viridi pallide subfusco, ad costas rubescente; corpus lignosum simplex, hexagonum, leviter sulcatum; folia biternata; foliola ex oblongo vel ovato lanceolata, præsertim terminalia

in acumen acutum sensim attenuata eademque in petiolulum conspicuum attenuata, lateralia in petiolulos breves contracta vel subsessilia, omnia integerrima, penninervia, nervis lateralibus utrinque 7–9 curvato-adscendentibus supra subtusque prominulis, infimis eorum reliquis vix longioribus, utrinque glaberrima, nec nisi glandulis microscopicis adspersa, nitidula, submembranacea, e viridi pallide fuscescentia, punctis lineolisque pellucidis subfuscis notata, epidermide mucigera; petioli omnes nudi; thyrsi in ramulis lateralibus paniculatim congesti, glabri; cincinni subsessiles; flores mediocres; sepala pulverulento-puberula; fructus . . . .

Rami thyrsigeri diametro 3 mm. *Folia* 18–20 cm longa; foliola terminalia petiolulo 6 mm longo adjecto 10.5 cm longa, 3 cm lata, lateralia decrescentim minora; petiolus communis 4 cm longus; stipulæ minutæ. *Cincinni* contracti, circ. 6-flori; pedicelli 2–2.5 mm longi, supra basin articulati; alabastra obovoidea, 2 mm longa. *Flores hermaphroditi: sepala* interiora 3 mm longa. *Petala* ex oblongo attenuata, 3.5 mm longa, intus laxe glanduligera; squamæ (cristis exclusis) petala dimidia æquantes, margine villosiusculæ, superiores crista usque ad basin bifida (laciniis subacutis erectis) appendiceque deflexa brevi obtusa dense villoso-barbata, inferiores crista corniformi erecta instructæ. *Tori* glandulæ ovatae. *Stamina*: filamenta villosiuscula; antheræ glabræ. *Germen* pyriforme, trigonum, minutim canescenti-puberulum; stylus brevis; stigmata stylum æquantia.—*Obs.* Affinis *Serj. acutæ* Tr. et Planch. (Sect. xi; cf. Radlk. Serjaniæ Monogr. p. 274. Suppl. p. 142).

Rocks at Coban, Dept. Alta Verapaz, alt. 4,300 ft., March, 1887, v. Türckheim, (Ex Pl. cit. 1153).

Serjania rachiptera Radlk.—Scandens, fruticosa, glabriuscula; rami 6-costati, striato-sulcati, glabri, juniores tantum crispato-puberuli, cortice viridi ad costas pallide subfusco; corpus lignosum simplex, sulcatum, medulla ampliore repletum; folia ambitu triangularia, bipinnata vel pinnarum infimarum pinnulis infimis in foliolorum triades dissociatis transeuntia insupra decomposita, 6–8-juga, pinnis inferioribus 4-jugis, superioribus decrescentibus, summis foliola simplicia exhibentibus; foliola (pinnulæ) parva lateralia elliptica vel suborbicularia, terminalia subrhombea cum lateralibus proximis interdum confluentia, omnia sessilia, paucidentata, subchartacea, utrinque glabra nec nisi glandulis microscopicis adspersa, viridia, subtus pallidiora, punctis lineolisque pellucidis obsoletius notata, epidermide mucigera; petiolus communis perbrevis, nudus, margine hirtellus, rhachium omnium segmenta omnia alata, supra ad lineam medianum puberula; thyrsi solitarii vel in ramulis lateralibus paniculatim congesti, graciles; cincinni stipitati, abbreviati, puberuli; flores mediocres, albidi; sepala exteriora laxius, interiora basi densius puberula; fructus . . .

Rami thyrsigeri diametro 2 mm. *Folia* inferiora 14 cm longa, 9 cm lata; foliola terminalia 2.5 cm longa, 1.2 cm lata, lateralia inferiora (suborbicularia) diametro circ. 1 cm, superiora (elliptica) minora, angustioria; petiolus communis 0.5 cm, vix excedens, rhacheos primariæ segmenta inferiora 2 cm longa, 4 mm lata, superiora decrescentim breviora pinnarum vix 1 cm longa; stipulæ parvæ, ovato-triangulares. *Thyrsi* folia superantes, inferiores 16–18 cm longi, rhachi pedunculum communem glabrum gracilem apice haud raro circinatum subæquante puberula dense cincinnifera; cincinni stipite 4–5 mm longo suffulti, 7-9-flori, puberuli; pedicelli 2.5 longi, prope basin articulati; alabastra obovoidea, pedicellos æquantia. *Flores masculi: sepala* interiora 3.5 mm longa. *Petala* spathulata, sepala vix superantia, intus laxe glanduligera; squamæ superiores crista emarginato-bifida (laciniis acutis patulis) appendiceque deflexa brevi barbata, inferiores crista sat alta oblique emarginata instructæ. *Tori* glabri glandulæ superiores semiorbiculares, inferiores minores. *Staminum* filamenta pilosiuscula; antheræ glabræ. *Germinis* rudimentum trigonum, glanduligerum, ceterùm glabrum.—*Obs.* Affinis *Serj. Cambessedeanæ* Schlecht. et Cham. Sect. xii; cf. Radlk. Serjaniæ (Monogr. p. 290; Suppl., p. 150.)

Guarda Viejo, Dept. Guatemala, alt. 5,000 ft., Febr., 1890 J. D. S., (Ex Pl. cit. 1907).

Paullinia scarlatina Radlk.—Scandens, fructicosa; rami juniores pentagoni puberuli, adultiores subteretes, striati, lenticellorum seriebus notati; corpus lignosum simplex; folia 5-foliolato-pinnata; foliola superiora ex elliptico sublanceolata, inferiora ovata, apice in acumen obtusum producta, basi superiora longius breviusve attenuata, inferiora rotundata, omnia breviter petiolulata, integerrima, vel dente uno alterove notata, chartacea, transversim venosa, praeter axillas nervorum subtus barbatas glabra, nitidula, glandulis, microscopicis curvatis obsita, utriculis laticiferis reticulatis pellucidis sat crebris supra subtusque instructa, epidermide mucigera; petiolus basi utrinque vasorum fasciculo corticali instructus; rhachis submarginata; stipulatae parvæ, triangulares; thyrsi solitarii, axillares; bracteæ bracteolæque parvæ, subulatæ; flores sat magni, sepalis 3–5 fere omnino liberis; fructus ellipsoideus stipitatus, subapiculatus, valvarum costa mediana evanina tricostatus, extus glabriusculus, intus pilis longis fuscidulis dense villosus; semen late ovoideum, ventre subcarinatum; glabrum, arillo dorso fisso usque ad medium obtectum; cotyledones oleigeræ, interior tenuior, transversim plicata.

Rami thyrsigeri diametro 3-5 mm, cortice subfusco. *Folia* circ. 16 cm longa totidem lata; foliola 10–12 cm longa, 4.5–5 cm lata, sicca subfusca; petiolus communis 3–4 cm longus, supra sulcatus, rhachis paullo brevior; stipulæ 2. 5 mm longæ. *Thyrsi* folia subæquantes, robusti, pedunculo quam rhachis tomentella longiore; rhachis (fructifera) diametro 2 2.5 mm, sat dense cincinnigera, cincinnis sessilibus contractis; pedicelli fructigeri 6-7 mm longi, paullo supra medium articulati. *Sepala* (calycis fructiferi) tomentella, duo exteriora breviora, interiora circa 4 mm longa. *Tori* glandulæ ovatæ, pubescentes. (Reliquæ floris partes non suppetebant.) *Fructus* stipite 5–6 mm longo adjecto

2.5–3 cm longus. *Semen* 1.3–1.4 cm longum, testa atro-fusca, pilorum endocarpii impressione leviter striolata, nitidula.—*Obs.* Affinis *Paulliniæ costatæ* Schlechtend. et Cham.

Boca del Cajabon, Dept. Yzabal, alt. 350, Apr., 1889, J. D. S. (Ex Pl. cit. 1662).

Spondias Radlkoferi.—Leaves 7–9 jugate, about a foot long; leaflets granular-punctate, the upper pairs oblong-lanceolate (30–38 × 10–13 l.), the lower rhomboidal and smaller, obliquely and acutely caudate, midrib and 6–8 costal nerves pubescent: pedicels bracteose at base, shorter than buds, clustered toward apex of short tertiary branches of panicle: calyx-lobes round-ovate, obtuse: disk fleshy, depressed, pulvinate, radiate, pulverulent: anthers small, quadrate: ovary 3–4-locular, styles pointed: fruit not seen.—A species, otherwise similar to *S. lutea* L., to which as probably new my attention has been directed by Prof. L. Radlkofer, the eminent monographer of *Sapindaceæ*.—Escuintla, Dept. Escuintla, alt. 1,100 ft., Apr. 1890, J. D. S., (Ex. Pl. cit. 2087).

Galactia discolor.—Fruticose, erect (2–3 ft.), cano-pubescent: stipules filiform; leaflets twice to thrice exceeding petiole, shortly and subequally petiolulate, coriaceous, green and glabrate above, silvery lanate beneath, lanceolate to elliptical-oblong (20–42 × 6–16 l.), the terminal the greater, acute or obtuse at each end, apex mucronate or retuse: racemes subsessile, short (10–18 l.); flowers 6–12, half an inch long, purple: calyx-tube shorter than pedicel and filiform bractlets, its segments 4 times longer and nearly equaling petals: the vexillary round-oval, auriculate, not inflexed, its filament free: ovary silvery lanate.—*G. Jussiæana* HBK., likewise with habit of *Collæa* and flowers of *Eugalactia*, differs chiefly by smaller elliptical leaves emarginate at base with the terminal one remote, minute stipules and bractlets, less deeply parted calyx twice exceeded by roseate petals, the vexillary obovate and exappendiculate.—Santa Rosa, Dept. Baja Verapaz, alt. 5,000 ft., July, 1887, v. Türckheim, (Ex Pl. cit. 1321).

Oreopanax oligocarpum.—Arborescent, nitidous except sparsely stellate-pubescent panicle: leaves crowded at apex of branchlets and at intervals below, exstipulate, coriaceous, entire, 3-nerved, lanceolate (6–9 × 1–1¾ in.), apex acutely produced, base acute, petioles from a third to more than half as long and tumid at each end: panicle sessile, corymbiform,

subequalling petioles; heads small (in anthesis scarcely 2 lines in diameter), much exceeded by peduncles, loosely 5–8-flowered: of masculine flowers calyx obsolete, petals 4 and equalling filaments, styles united; feminine flowers not seen: berries 3–4 to a head, globose-ovoid, sulcate, 6–7-seeded, crowned with persistent radiate styles.—*O. capitata* Dcne. et Planch., a nearly related species, differs by stipulate leaves ovate to obovate, large diffuse panicle of shortly pedunculate many-flowered heads, petals 5, long-exsert stamens and free styles of masculine flowers.—Pansamalá, Dept. Alta Verapaz, alt. 3,800 ft., Apr. 1889, J. D. S., (Ex Pl. cit. 1743). Collected also by Sor. Juan Cooper near Cartago, Costa Rica, alt. 5,000 ft., Mch. 1888, No. 322.

Parathesis sessilifolia.—All parts except nitid upper surface of leaves rufo-tomentose with long-stipitate stellate hairs: leaves oblanceolate (6–8 × 1¾–2 in.), acuminately produced, tapering from above middle to acute sessile base, pergameneous, subcrenulate, both surfaces nigro-punctate and finely reticulate: panicle terminal, exceeding leaves, pyramidate, lower branches leaf-bracted: flowers 6–10, corymbosely fasciculate toward apex of secondary branches, subequalling pedicels, in all parts linear-maculate, filiform bractlets a half shorter: sepals acutely lanceolate (½ l.): segments of corolla linear-lanceolate (2½ l.), glabrous within, revolute: anthers affixed near base, oblong (1¼ l.), thrice exceeding filament: berry 4 l. in diameter.—Peculiar by indument and sessile leaves.—Coban, alt. 4,300 ft., Aug. 1886, v. Türckheim, (Ex Pl. cit. 1443).

Parathesis pleurobotryosa.—Fusco-tomentulose: leaves elliptical (4–6 × 1½–2 in.), ends similarly acute, subentire, glabrate above, epunctate, opaque, 14–18 costal nerves distinct: panicles axillary, equalling leaves, racemiform, short branches terminated by 3–5 umbellately clustered minutely bracteolate pedicels equalling scarcely maculate flowers: corolla-segments ochraceo-furfuraceous on both sides: anthers short (¾ l.), equalling filament: ovary smooth: berry not seen.—Anthers excepted flowers are similar in form and dimensions to those of preceding species. *P. melanosticta* Hemsl., (Ex Pl. cit. 1706), with inflorescence also strictly axillary, differs by glabrity, nigro-punctate oblong-elliptical leaves acuminate at apex and long-tapering into petiole with more numerous costal nerves uniting in marginal arches, com-

pound panicles, ovate sepals, half smaller white maculate flowers, lanceolate corolla-segments smooth without and albo-furfuraceous within, pubescent ovary.— Santa Rosa, alt. 5,000 ft., Sept. 1888, v. Türckheim, (Ex pl. cit. 1,442).

Fimbristemma calycosa.—Leaves oblong-cordate (4–6 in.), abruptly acuminate: peduncles (6–10 l.) exceeded by petioles, the much longer pedicels cymosely and radiately 6–8 fasciculate, flowers an inch in diameter: segments of calyx oval, pallescent: segments of corolla somewhat longer, narrower, glabrous, dark-yellow, dextrorsely convolute: exterior crown lobeless, densely long-fimbriate; lobes of the interior ovate, equalling fringe, bidentate, naked: anthers appendiculate below with a bicornute wing, caudicle nearly as long as pollen-mass: follicle not seen.— *Fimbristemma*, as limited by Turczaninow and not of Bentham and Hooker, is represented by one other species, *F. gonoloboides* Turcz., which differs *ex char.* by peduncles exceeding petioles and bifid, half larger corolla twice exceeding calyx, lobed exterior crown, lobes of the interior entire and with an inner cucullate appendage, anthers tipped with a membrane. *Callæolepium Warscewiczii* Karst., cited by Benth. & Hook. as a second species of *Fimbristemma*, is maintained by its author to be generically distinct by form of crown, and to belong by position of pollen-masses to the group of *Cynancheæ* rather than to *Gonolobeæ*, (Botan. Jahrb. viii. 360).— Chucaneb Mt., Dept. Alta Verpaz, alt. 6,000 ft., Apr. 1889, J. D. S., (Ex Pl. cit. 1,500).

Explanation of Plate XVI.— Fig. 1. flowering branch. Fig. 2, flower with calyx and corolla removed. Fig. 3, exterior crown. Fig. 4, interior crown. Fig. 5, pistil. Fig. 6, pollen-masses. (Fig. 1 is natural size; the others are variously enlarged.)

Nephradenia fruticosa.—Erect virgate shrub 6–8 ft. high: leaves linear-lanceolate ($6–8 \times 1–1\frac{1}{4}$ in.), tapering acutely to apex and short (5–7 l.) petioled, eglandular, pale beneath, conspicuous arching veins about 15 to a side: cymes extra-axillary, scarcely half as long as leaves, pedicels exceeded by peduncle and 3–8-subfasciculate in one or two bracteose clusters: corolla rugose, 15-nerved, pale-yellow, 9 lines broad, semi-fid, tube twice exceeding oval ciliate calyx-segments, half-oval lobes naked and emarginate: processes of crown equalling gynostegium, half-free; the adnate half small, triangular, inflated and concavely bilobate at base, margin entire, prolonged into subulate free upper half; pollen-masses

attached at base: stigma convex, exumbonate: immature follicle fusiform, tapering to long stipe.—*N. neriifolia* Benth. et Hook., the nearest congener, is a herbaceous perennial with linear-oblong leaves rounded and glandular at base, ciliate corolla, adnate coronal processes cymbiform, stigma umbonate.—Rocky islands in Rio Rubelcruz, Dept. Alta Verapaz, alt. 2,500 ft., May 1887, v. Türckheim, (Ex Pl. cit. 1,251); same locality, Apr. 1889, J. D. S., (Ex Pl. cit. 1,742).

Solenophora erubescens.—Glabrous, rubescent, tumid nodes marked by an interpetiolar line: leaves oval to elliptical-oblong, the larger in the pairs 2–3½ in. long, the other a third smaller, apex acutish, base inequilateral, coriaceous, rubescent beneath, indistinctly sinuate-serrate, petioles from ¼ to ¾ as long as leaves: flowers single on shorter axillary peduncles bibracteate in middle, or few in trichotomous cymes chiefly terminal: calyx coriaceous, 5-costate, rubro-maculate, obconic (9 l.), in flower ¼- and in fruit ½-adnate, lobes ovate (2 l.): corolla infundibuliform, twice exceeding calyx, yellow, ⅔-tubular, limb expanding to 8 lines broad; lobes suberect, transversely oblong (2 × 5 l.), the interior the greatest and pectinate-crenate: style 2-lobulate: fruit baccate, oval (5 l.), crimson, crowned with persistent 2-lobed gland.—Habit peculiar by glabrity and small leaves.—Rocks of a waterfall, Pansamalá, alt. 3,800 ft., May 1887, v. Türckheim, (Ex Pl. cit. 731); same locality, Apr. 1889, J. D. S., (Ex Pl. cit. 1,684).

Besleria Pansamalana (*Podobesleria* Benth. et Hook.).—Epiphytal, repent, ligneous branches ascending a foot or two, pubescent: leaves shortly petiolate, unequal in the pairs, obovate-oblong (5–6 in.), the lower smaller and obovate-rhomboid, acuminate, base obliquely acute, serrulate above middle, under surface pale-pubescent: peduncles single from one or both uppermost axils, half as long as leaves, 1-flowered: calyx-segments nearly distinct, ovate (4–5 l.), green, plurinerved, the 2 exterior narrower: corolla from narrow saccate base horizontally supine, ventricosely calceiform, 14 lines long, less than half as high, crimson; throat facing upwards midway between base and ventral apex, constricted (3 l.); divisions of small limb roundish, unequal, erect: genitals included: cells of anthers forming nearly a circle, connective orbicular: disk annular: style short (3 l.), ⅓-bilobed.—Related to *B. Onogastra* Hanst. by the corolla curiously resembling the lip of *Cypripedium*, but distinct by inflorescence, calyx,

etc.—Pansamalá, alt. 3,800 ft., Jan. 1887, v. Türckheim, (Ex Pl. cit. 196); same locality, Apr. 1889, J. D. S., (Ex Pl. cit. 1,798).

EXPLANATION OF PLATE XVII.—Fig. 1, flowering branch. Fig. 2, corolla laid open. Fig. 3, stamen. Fig. 4, pistil. (Fig. 1 is natural size; the others are variously enlarged.)

Macfadyena simplicifolia.—Erect (12–15 ft.), compressed branchlets dichotomous, articulations of petioles and pedicels glandular: leaves simple, elliptical ($5–7\frac{1}{2} \times 2–3$ in.), acute at each end, beset with cystoliths: flowers few, opposite in terminal short racemose clusters, short pedicels little exceeding subulate bractlets: calyx lanceolate (18–22 l.), acuminate, in anthesis closed at apex and base: corolla twice longer, white, tubulose-infundibuliform, throat $\frac{1}{2}$ in. wide, lobes roundish (6–9 l.): oblong anther-cells divergent at base, staminode not present: disk cupular: stigma minutely lamellate: ovules 2 to each placenta, superposed, wings hyaline: capsule not seen.—Anomalous by erect habit, simple leaves and terminal inflorescence.—Borders of forest, Pansamalá, alt. 3,800 ft., Aug. 1886, v. Türckheim, (Ex Pl. cit. 1,030).

EXPLANATION OF PLATE XVIII.—Fig. 1, flowering branch. Fig. 2, corolla laid open. Fig. 3, pistil with half of calyx. Fig. 4, anthers. Fig. 5, stigma. Fig. 6, vertical section of ovary. (Figs. 1–3 are natural size; the others are magnified.)

Henrya imbricans.—Stems several from base, a foot or more long, decumbent, smooth, white, nodes verrucose: young leaves small (1 in.), ovate, acuminate, mucronate, long petiolate, pubescent: spikes short, densely flowered, 2–3-subfasciculate, axillary, or leafy-bracted in a long slender terminal panicle: bractlets simulating involucres, oblanceolate, mucronate; involucres a third longer (5 l.), imbricating, valves mucronate: corolla large (6 l.), exsert in bud: anther-cells elongate-oblong.—Both *H. scorpioides* Nees and *H. costata* Gray differ conspicuously from above by simply spicate loosely interrupted inflorescence; the former also by glandulose leaves acute at base, minute roundish bractlets, half smaller flowers, elongated style; the latter also by pluricostate shortly petiolate leaves, small cuspidate involucres.—Banks of Laguna Amatitlan, Dept. Amatitlan, alt. 3,900 ft., Febr. 1890, J. D. S., (Ex. Pl. cit. 1,923).

PISONIA ACULEATA L., var. **macranthocarpa.**—Spines infra-axillary, straight: pedicels of large (6 in.) cymes $1\frac{1}{2}$–2 in. long; fruit obovate (9 l.), half as broad, glands long-stipitate.—Escuintla, alt. 1,100 ft., Apr. 1890, J. D. S., (Ex. Pl. cit. 2,091).

Neea psychotrioides.— Fruticose (6-8 ft.), dichotomous, smooth except rufo-fuscous pubescence of younger parts and inflorescence, branchlets terete and grayish: leaves subopposite, 4-verticillate at forks, unequal in the pairs, equilateral, oblong ($4–5 \times 1\frac{1}{4}–1\frac{1}{2}$) in., acuminate, base rounded, petioles short (2–4 l.); corymbiform cymes long pedunculate from forks of branches, subequaling leaves, axes 3–5-approximated and in fruit divaricate, cymules 3-flowered; calyculate bracts 2–4, subulate ($\frac{1}{4}$ l.), persistent: staminate perianth not seen; the pistillate nearly sessile, oval (2 l.), mouth contracted, rudimentary stamens 8–10, ovary globose, style subexsert, stigma dilated: anthocarp ellipsoid ($3\frac{1}{2} \times 2$ l.), compressed, pubescent, pluristriate, constricted below tomentulose limb.— *N. Wiesneri* Heimerl, nearly related as described and figured in detail (Botan. Jahrb. xi. 89, t. ii), differs by elliptic-lanceolate leaves dimorphous in the pair, terminal 2–3-chotomous open glabrous inflorescence, slender elongated pedicels, ovate-tubulous perianth, fimbriate stigma, glabrous terete anthocarp not striate. *N. oppositifolia* Ruiz et Pav., also related, is distinguished by elongated 5-staminate perianth, etc.— Escuintla, alt. 1,100 ft., Mch. 1890, J. D. S., (Ex Pl. cit. 2,069).

DALECHAMPIA SCANDENS L., var. **trisecta.**— Leaves glabrate, elobate and cordate-ovate, or chiefly trisect with petiolulate leaflets.—San Juan Mixtan, Dept. Escuintla, alt. 500 ft., Apr. 1890, J. D. S., (Ex. Pl. cit 2,079.)

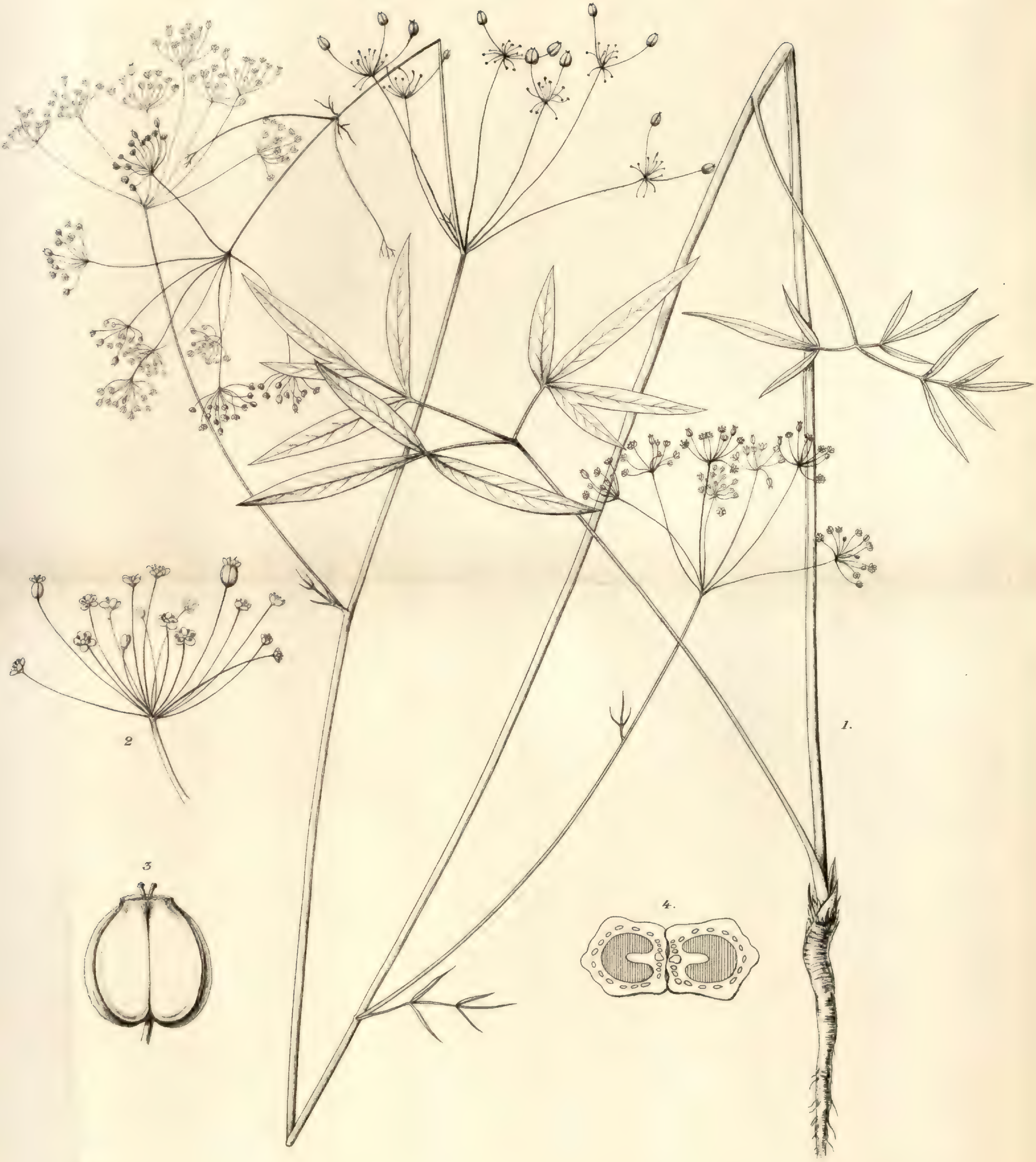
Pinus (§ PSEUDOSTROBUS) **Donnell-Smithii** Mast.— Arbor altitudine mediocris vel humilis; ramulis crassis asperatis; squamis fulcrantibus 10–12 mm. long. subcoriaceis castaneis lanceolatis longe acuminatis margine laciniato-fimbriatis, fimbriis ascendentibus vix intertextis; fasciculis dense approximatis 5-phyllis basi vaginatis, vaginis circa 12 mm. long. e squamis lanceolatis pluribus constantibus, squamis infimis subcoriaceis ad margines integris sursum paulatim increscentibus, squamis mediis ad margines albidis longe fimbriatis, fimbriis horizontaliter divergentibus intertextis fasciculum obvolventibus, squamis summis hyalinis integris; foliis circa 13 cm. long. 1 mm. et ultra lat. rigidis triquetris ad angulos serrulatis apice subulatis, canalibus resiniferis parvis paucissimis sub epidermide positis ? vel nullis; stomatibus in utroque latere per series 6–7 dispositis; amentis masculis pluribus ad apices ramulorum capitatim-aggregatis, singulis 25–30 mm.

long. 5–7 mm. lat. erectis vel ascendentibus rectis cylindratis obtusiusculis basi bracteis subcoriaceis castaneis suffultis, bracteis infimis margine albido-fimbriatis, bracteis summis margine integris albido-limbatis; antherarum connectivis suborbicularibus erosis aurantiaco-purpureis; amentis feminiis pedunculo deflexo crasso impositis, curvatis cylindrato-conicis; squamarum apophysibus valde promimentibus deflexis carnoso-coriaceis irregulariter sub-5-angulatis carina transversa brevi notatis, medio depressis, umbone lato deltoideo deflexo; strobilis adultis pendulis circa 10 cm. long. 6-7 cm. lat. cylindrato-oblongis apice obtuse conoideis, (squamis autem siccitate a sese separatis strobilus ovoideo-subglobosus evadit); squamis lignoso-coriaceis crassiusculis apophysibus circa 10 mm. long. 16 mm lat. rhomboideis sub-pyramidatis apice cum umbone excentrico reflexis; seminibus circa 2 cm. long. 5 mm. lat. superne alatis, ala membranacea pallide fusca angusta oblonga margine hinc paullo crassiore recta illinc tenuiore falcatim curvata.—De hac specie insigni et, ut videtur, hactenus indescripta, nec non strobilorum squamarumque notis valde distincta ita in litt. scribit oculatissimus repertor: "Abunde occurrit versus cacumen montis, et etiam ad ejus culmen, ad alt. 12,300 ped. ubi autem arbor pumila 10-12 ped. tantum evadit." Cl. Godman etiam qui hanc speciem loco eodem observabit abhinc annos triginta tradit hancce arborem cingulam circa montem efficere ad alt. 10,000 ped. usque ad culmen aliis arboribus nullis intermixtis. In opere laudato auspiciis cl. Godman edito et a sollerte Hemsley confecto, cui nomen Biologia Centrali-Americana, vol. iii, arbor haecce obiter injecta est, nomine tamen et descriptione omnino praetermissis.— Summit of Volcan de Agua, Dept. Zacatepequez, alt. 12,300, Apr. 1890, J. D. S., (Ex Pl. cit. 2182).



C. E. Faxon del. B. Meisel, Lith. Boston.

ARRACACIA DONNELL-SMITHII, Coulter & Rose. n. sp.



C.E. Faxon del.

DONNELLSMITHIA GUATEMALENSIS, n. sp.

B. Meisel, Lith. Boston.



C. E. Faxon, del. B. Meisel, Lith. Boston.

CEPHAELIS GLOMERULATA, n. sp.



C.E.Faxon.del. B.Meisel, Lith.Boston.

FIMBRISTEMMA CALYCOSA, n. sp.



C.E. Faxon, del. B. Meisel, Lith. Boston.

SOLANUM OLIVÆFORME, J. Donnell Smith.



C. E. Faxon del. B. Meisel, Lith. Boston.

CAMPANEA PICTURATA, n. sp.



C. E. Faxon, del.

B. Meisel, Lith. Boston.

BESLERIA PANSAMALANA, n. sp.



C.E.Faxon.del. B.Meisel, Lith.Boston.

MACFADYENA SIMPLICIFOLIA, n.sp.



C. E. Faxon, del. B. Meisel, Lith. Boston.

NEPHRODIUM DUALE, n. sp.